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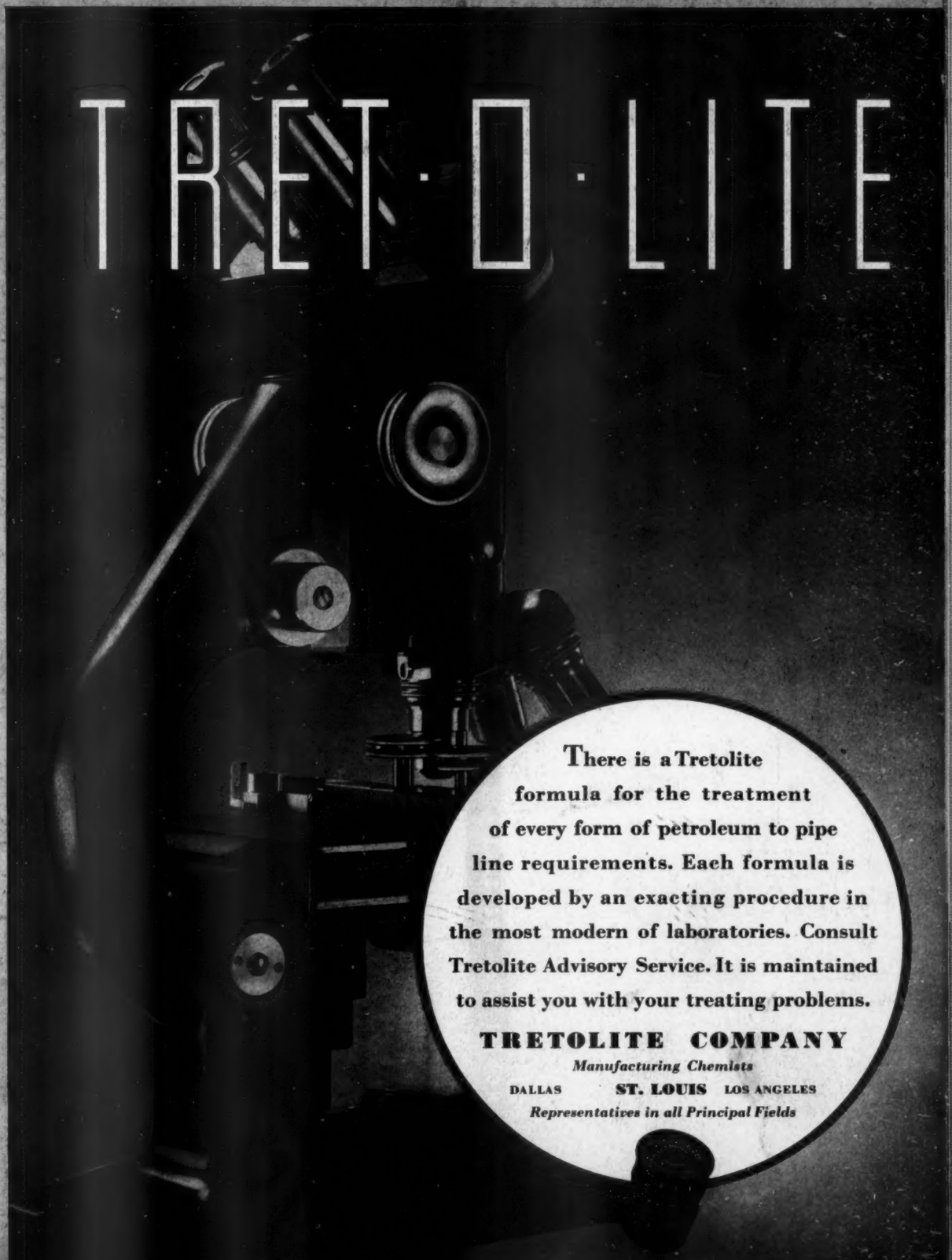

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The Oil and Gas Journal

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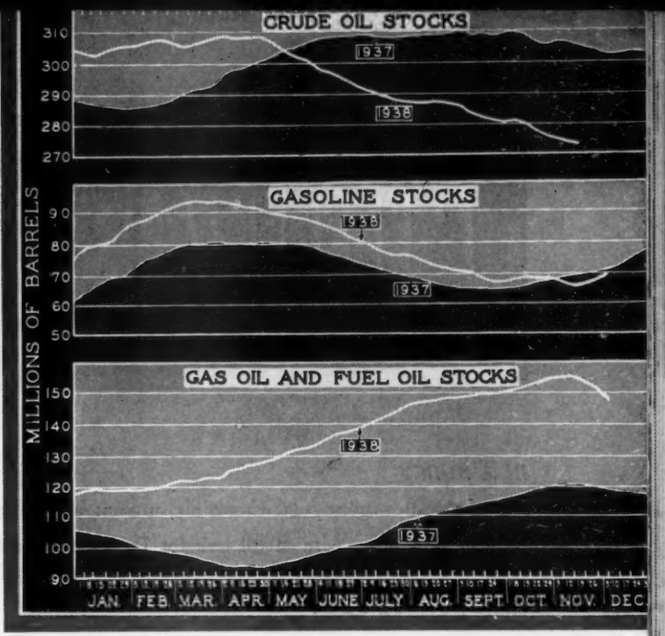
Trends

Californians Get Firm Warning to Cut Their Production to Demand



OKLAHOMA, Kansas and California were responsible for the decrease of 52,475 barrels in the production of the United States in the past week, Oklahoma's average daily output having been cut 29,600 barrels, California 22,150 barrels and Kansas 7,760 barrels. The production of Texas showed an increase of about 5,000 barrels per day.

CRUDE PRODUCTION *3,215,519 barrels daily average—down 52,475. One year ago 3,386,907 barrels.*

CRUDE STOCKS *271,955,000 barrels as of November 19—down 1,439,000. One year ago 304,324,000 barrels.*

GASOLINE STOCKS *69,155,000 barrels as of December 3—up 527,000. One year ago 71,244,000 barrels.*

GAS AND FUEL OIL STOCKS *151,617,000 barrels as of December 3—down 2,017,000. One year ago 119,836,000 barrels.*

REFINERY RUNS *3,175,000 barrels daily week ending December 3—down 120,000. One year ago 3,230,000 barrels.*

The unhealthy crude oil situation in California was emphasized by the Standard Oil Co. of California in a strongly worded letter addressed to producers, refiners and marketers in that state. The letter might be taken as an ultimatum demanding that production be brought down to actual requirements, concluding with the words: "Today some purchasers of crude oil foresee that their storage facilities will be full within a few months. Several buyers are already without storage facilities for certain products. The industry cannot afford to add more petroleum to storage. The financial burden is too heavy to carry."

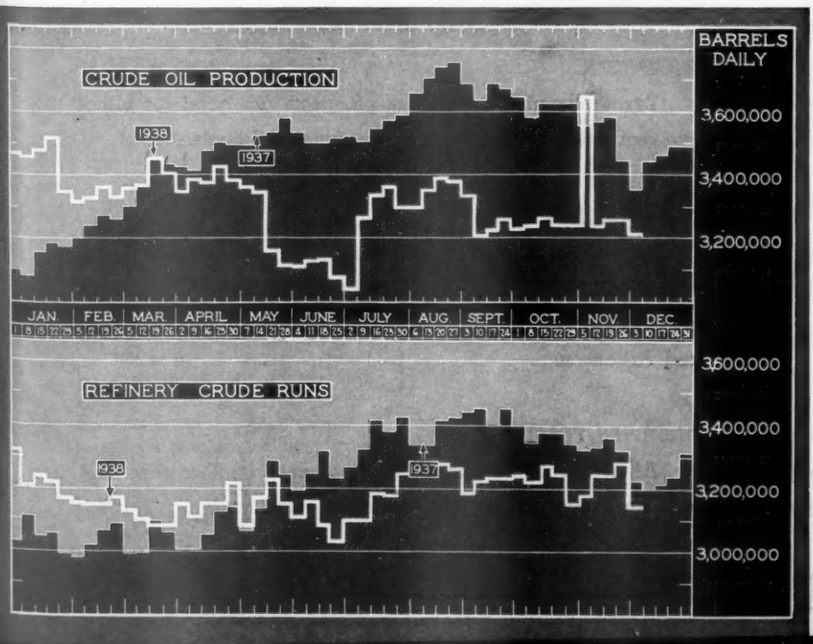
The only change in crude oil prices in the course of the week was made by the Humble Oil & Refining Co. effective December 3. The company discontinued special posted prices on oil of 41, 42, 43, 44 and 45 gravity in certain Texas areas. The new schedule stops at 40 degrees and over in those fields. Companies that had met the previous Humble price schedule at once conformed to the new one. The Humble company reduced the price of Flour Bluff, Texas, crude 4 cents per barrel.

The Kansas Corporation Commission has not yet decided on allowable production in December. The fight for special allowables by certain independent operators and refiners will probably be settled on December 17 when final arguments will be heard.

Heavy fuel oil, which had become an acute problem, was marching swiftly into better position in the past week, its marked advance providing the most notable feature of the refinery market. Although interior refiners, with freight differentials to be absorbed, will be the last to receive direct benefit from the quickened industrial activity, they too are withholding price concessions which they formerly granted readily in order to move over-accumulations. Furnace oils were responding to the stimulating influence of colder weather in eastern areas, but in the Mid-Continent this division of the market was still inclined to be laggard. Motor fuel consumption was falling off seasonally, though the movement continued at levels much higher than had been foreseen. There still persisted the weak price structure, which has made profitable operation difficult or impossible for refiners who must pay posted prices for crude. Natural gasoline made further gains, with offerings dried up and prices extremely tight in both Oklahoma and Texas. Wax was maintaining its vigor.

DAILY AVERAGE PRODUCTION FOR WEEK

	Dec. 3, 1938	Bur. Mines Dec. est. of demand	Dec. state allowables	Nov. 26, 1938
Oklahoma City	77,550	.....	.....	104,375
Fitts	35,800	.....	.....	36,750
Remainder of state	304,200	.....	.....	306,025
Total Oklahoma	417,550	500,700	428,000	447,150
East Texas	371,135	.....	.....	370,765
West Texas	205,917	.....	.....	205,096
North Central Texas	104,174	.....	.....	104,472
Texas Panhandle	62,346	.....	.....	64,143
East Central Texas	90,925	.....	.....	90,770
Gulf Coast Texas	336,930	.....	.....	333,625
Southwest Texas	101,275	.....	.....	98,769
Total Texas	1,272,702	1,343,900	1,294,577	1,267,640
North Louisiana	72,560	.....	.....	70,875
Gulf Coast Louisiana	188,365	.....	.....	187,170
Total Louisiana	260,925	248,000	247,580	258,045
California	641,750	589,700	610,000	663,900
Kansas	148,240	159,000	163,400	156,000
Arkansas	48,600	51,600	52,000	49,350
Eastern Fields	91,700	97,100	.....	93,100
Illinois	108,011	71,900	.....	102,247
Michigan	50,671	51,000	.....	51,182
New Mexico	106,410	100,300	98,285	108,240
Rocky Mountain area	68,960	92,600	.....	71,140
Total United States	3,215,519	3,305,800	.....	3,267,994



SPARKS FROM THE NEWS

IN A HURRY

Unusual urgency is attending current export orders for natural gasoline. Almost all ask for December loading.

NEW KANSAS POOL

Another Misener sand pool has been opened in Kansas, and if it proves as rich as the rapidly growing Zenith field some big production figures can be expected.

VANGUARDS OF OIL

Camp of geophysical crew located in western part of Venezuela near the Colombian border

WHERE NEEDED

The 52,000-barrel daily reduction in crude oil production last week will increase in statistical significance when it is reflected in similar reductions in crude runs to stills.

"SHOW-ME"

Caution is the watchword among natives in the lease-boom area of northern Missouri. A Missouri paper recently ran a front page editorial advising land owners to scan carefully any paper submitted by oil men and to have their lawyers pass on it before signing it.

NEW MEXICO GAS STRIKE

The gas strike in rank wildcat country near Lovington, N. Mex., has started something. Two offsets and two outlying wildcats are being drilled and other operations are anticipated.

MAJOR ACCOMPLISHMENT

The control of Rumanian crude oil by Germany, if accomplished, will exceed in economic importance every other achievement of Herr Hitler.

DEEP IN OKLAHOMA

Oklahoma's deepest drilling well, a wildcat in Washita County, has passed the 10,000-foot mark and may set a new depth record for the state, surpassing the 11,230-foot total depth of the Binger discovery well.

EMPHASIZED

Another warning has been issued against overproduction in California but this one indicates something will be done about it.

FLYING LIGHT

The latest transcontinental flier to get in the news consumed 123 gallons of gasoline, less than a quart of oil, a quart of milk, a quart of water, a pound of dates and a dozen candy bars.

REMEMBERED AT LAST

Heavy fuel oil, which a few weeks ago looked like the forgotten product, is now actively sought, with prices tightening.

OPTIMISTIC

Texas commissioner thinks prospects are good for effective regulation in Louisiana, Arkansas and Illinois.

COMPARATIVE SIZE

Two plants in Netherlands West Indies refine 400,000 barrels of crude oil daily. This is 28 per cent more than the combined throughput of 50 operating plants in Oklahoma, Kansas and Arkansas.

ANOTHER TRIAL

After a prolonged period of quiescence another court test of Texas conservation laws is under way.

Will GERMANY *Get Rumanian Oil?*

What effect would Germany's advance upon the Rumanian oil fields have upon the world oil industry?

Their importance in case of war was illustrated in 1914 when every effort was made to prevent their being seized and used by the Germans.

Their importance in times of peace may be gauged by the fact that 80 per cent of Rumania's production (or about 50,000,000 bbls. annually) has been exported.

The American oil business has seen the effects an addition of 15,000,000 bbls. of centrally located production in Illinois has had in disturbing established markets in this country.

Back in 1931 the arrival of cargoes of Rumanian gasoline at Detroit, carried in tankers to Montreal and transshipped by boat, or shipped by tanker to Baltimore in winter and moved by tankcars, caused much uneasiness.

The following year international conferences were held in Europe in an attempt to reach an agreement regarding excessive petroleum exports from Rumania and Russia.

Increasing domestic consumption in the U.S.S.R. subsequently reduced Russian exports and in recent years Rumanian restrictions on exploration and on foreign exchange discouraged operations to the point where production and exports have been decreasing.

The most recent figures on Rumanian exports show that about 14,000,000 bbls. went to France and French colonies in 1937; some 8,500,000 bbls. to Great Britain and British possessions; about 3,700,000 bbls. to Germany and Austria and something over 4,000,000 bbls. to Italy. French participation in Iraq lessened need for imports from Rumania. Petrol Block S. A., a French and Rumanian company operating three refineries in Rumania, recently was reported disposing of one plant to a Czechoslovakian company.

Redeventza S. A. of Rumania is constructing a refinery near Lisbon, Portugal, under a plan which would assure the refinery a market for half its production in Portugal.

The possible effect of German domination in Central and Southeastern Europe on the Rumanian situation has been emphasized by the recent visit of King Carol to Paris and London where he failed to find financial or political support, and his subsequent visit to Hitler with a reported promise of a loan of $60,000,000 from Germany.

Few imagine that, except in the event of another world war, Germany would attempt to annex Rumania but many argue this would not be necessary to give Hitler control of Rumanian resources by economic and commercial penetration.

It is conceivable, it is said, that in the chaotic condition of European diplomacy, Germany could exert pressure on Rumania so as to give Berlin practical control of Rumanian oil.

The crude oil of Rumania is high grade, mixed base, containing naphthenic and paraffinic hydrocarbons, as indicated in the analyses.

CRUDE OILS OF RUMANIA

	Moreni	Gura Ocuitzei
Gravity, A.P.I.	36.0	37.2
Sulfur, per cent	0.14	0.16
Distillation—		
Gasoline, per cent	28.0	29.5
Gravity	55.6	55.9
Endpoint, °F.	392	392
Octane No.	52	54
Sulfur, per cent	0.03	0.03

There are 30 refineries in Rumania, with a total daily capacity of 239,500 bbls. and a cracking capacity of 35,850 bbls.

The estimated reserves in Rumania are 633,000,000 bbls. and the total production, including estimate for 1938, has been about 836,385,000 bbls.

The principal countries interested in Rumanian oil are Britain through holdings in Dutch-Shell, Steaua Romana and Phoenix companies; the Netherlands through the Royal Dutch-Shell interest; France with interests in Steaua Romana and Colombia; Belgium with the Concordia company; America through the Romano Americana controlled by the Standard Oil Co. (New Jersey). The Rumanian Government and bankers have 50 per cent interest in Steaua Romana and also control Credit Minier and have an interest with the French in the Colombia company. Italian interests are represented in the Prahova company controlled by Azienda Generala Italiana Petroli.

The Germans have not had any major interests in Rumania since the war when the principal property they owned was Steaua Romana which was divided after the war 25 per cent to British interests, 25 per cent to French and the balance to the Rumanian Government and bankers.

It is possible the total available oil in Rumania at this time might not be sufficient to meet the estimated German demand in the event of war and Hitler may seek to discover new areas.

Germany's consumption of motor fuel this year has been estimated at 21,000,000 bbls. Its imports of crude and products during the first half of the year totaled 15,000,000 bbls. or presumably 30,000,000 bbls. for the year.

While Germany is producing about 60 per cent of its motor fuel requirements by synthetic processes, the cost is about three times as much as gasoline. Rumania has had a quota on exports to Germany and this might be removed to permit much greater exportation of crude for use in hydrogenation.

Another speculation that is interesting some is whether, if Germany had the power, after supplying its own needs from Rumania it might not turn to exporting petroleum products, perhaps on the barter system, to obtain foreign currency for other purposes.

Meanwhile the less pessimistic students of the situation believe that since there has been a trend this year to divert Rumanian oil to Germany and Italy there will be little left for export to other countries if this trend increases.

Since the former agreement under which Rumania permitted operating companies to retain 10 per cent of the proceeds from export sales in foreign currency was rescinded, all proceeds have been required to be paid in Rumanian lei. Consequently, it has been reported, some companies have found it difficult to pay their dividends to stockholders outside of Rumania and for that reason have been applying earnings to depletion of capital, keeping themselves in liquid form.

Rumanian oil fields in relation to Germany

Drilling crew and officials at new discovery well of Richfield Oil Corp.

Tupman Field Discovery Fifth in California in 1938

By L. P. STOCKMAN

LOS ANGELES, Calif., Dec. 5.—California's fifth oil field discovery during 1938 was recorded when Richfield Oil Corp. completed No. 1 K.C.L.-Western in the Tupman district of Kern County flowing 3,752 bbls. of 49-gravity and 18,000,000 feet of gas per day from 8,677 feet.

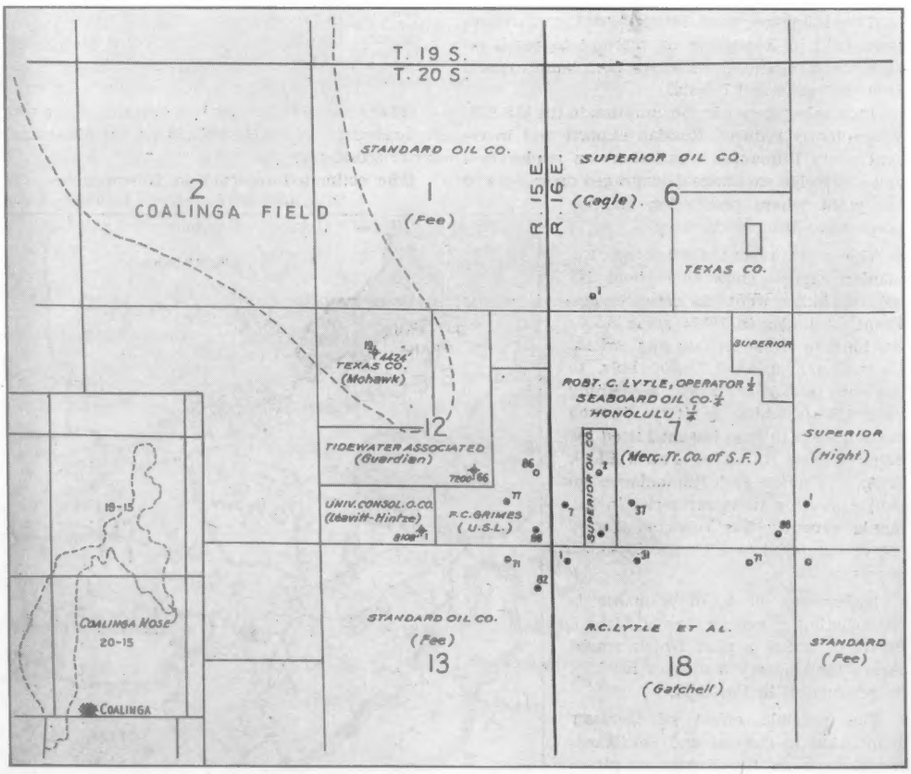
Production is coming from a productive interval believed to be the equivalent of the Stevens zone found by Shell Oil Co. in the Ten Section field and subsequently found highly productive by Ohio Oil Co. in the Canal field and Standard Oil Co. in the Greeley field.

Completion of Richfield Oil Corp. initial well in the Tupman area marks the second primary discovery within two weeks in San Joaquin basin as last week Ohio Oil Co. discovered a field in the Coles Levee district about three miles southeast of Richfield's new field. The high gravity produced by the discovery well in the Tupman district is attributed to the well producing a condensate from the gas cap along with the crude oil. This is being remedied as Richfield's field department has killed the discovery well preparatory to blanking off the gas cap and should have it back on production within a few days.

Other Discoveries

No. 1 K.C.L.-Western is on a block of about 6,000 acres and is another of several important discoveries found on property in San Joaquin Valley owned in fee by Kern County Land Co. Other discoveries on acreage of this company include Rio Bravo, Ten Section, Canal, Canfield Ranch, Wasco and Coles Levee. Richfield Oil Corp. discovery logged top of the Stevens zone at 8,251 feet and it has a total penetration of 271 feet in the productive horizon of which 251 feet is rich oil sand. The hole was finished with an 8⅝-inch water string landed at 8,406 feet and 339 feet of 4¾-inch liner including 280 feet of 120-mesh screen landed at 8,676 feet. Just before being killed, this well was curtailed by reducing the flow bean to 14/64-inch behind which the tubing pressure built up to 2,500 pounds and casing pressure reached 2,600 pounds. After the gas cap has been blanked off the well is expected to produce crude testing around 35 degrees, and should show producing characteristics similar to those experienced in other adjacent fields producing from the Stevens zone.

The new field is about 4 miles west of the Ten Section field and about 1 mile east of the Elk Hills

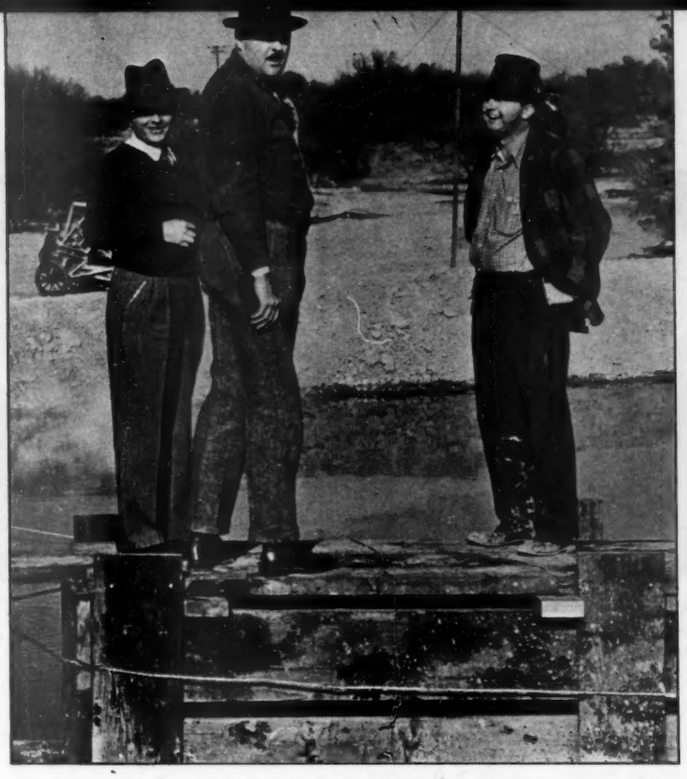


Southeast Coalinga field south of the Coalinga nose yielded the largest rated well in California since the Lakeview gusher in 1910. The record well is No. 31 Gatchell in Section 18-20-16

field with the discovery 190 feet south and 660 feet west of the north quarter corner of Section 32-20-25. (Location of the new Tupman field discovered by Richfield Oil Corp. and Coles Levee field discovered by Ohio Oil Co. was shown on a map on Page 81 of The Oil and Gas Journal, November 24, 1938, issue.)

Geophysical Discovery

Richfield's discovery was located following a geophysical survey and credit for its completion, aside from Charles Jones, president, goes to Harold W. Hoots, chief geologist; Frank Morgan, manager of exploration; Robert Hicks, geologist for the San Joaquin Valley district; and D. Dana, manager of geophysical exploration. The completion fills Richfield's need for crude as the company is finishing a new refinery and reconditioning other facilities in the Watson area. The well was brought in under control although gas flashed and caught fire from friction but flow was moved through the traps, and the blaze went out when the gas by-passed.



Charles S. Jones, president of Richfield Oil Corp. (center), inspecting flow of Richfield's discovery well in Tupman district of Kern County

The Tupman area consists of low rolling hills and a gradually sloping plain with surface drainage south toward Buena Vista Lake. The discovery well is about 1 mile east and slightly north of a deep test which Standard Oil Co. drilled in the east end of Elk Hills to 8,404 feet and abandoned when the top of the Miocene was barren. The location of the new Tupman field indicates another possible line of folding. It is probable both the Coles Levee and Tupman fields are related to Elk Hills as the axis of the Elk Hills structure bifurcates with one limb passing through the Tupman area and another trending south to the Coles Levee district. Reflections, due to the depth of the basement, were rather poor but excellent interpretation was responsible for the location.

Southeast Coalinga

The Southeast Coalinga field which gained the limelight by completion of a large flowing well is definitely a field of importance. While Petseahon No. 31-18-F did not actually flow 50,000 bbls. or any other large amount as it was shut in immediately subsequent to completion, officials believe the well is capable of flowing 50,000 bbls. per day wide open. This estimate must remain conjectural because R. S. Lytle,operating trustee, has issued orders to keep production to a minimum.

Another Well Due

Southeast Coalinga field has produced only a little more than 100,000 bbls. of crude since its discovery by Petroleum Securities Co. a few months ago. Harry Dievendorf, field superintendent for R. S. Lytle, should have another excellent well ready for a production test within a few days. No. 88-7-F in Section 7-20-16 has cored 311 feet of oil sand to present bottom, 8,021 feet, with the bit still in the pay. No. 18-31-F in Section 18-20-16 and the well that has focussed attention on the field was finished at 7,475 feet with a 9⅝-inch water string landed at 6,920 feet and 573 feet of 6⅝-inch liner including 552 feet of 100-mesh. The well was brought in flowing through a 15/64-inch bean and flowed for a period of only four hours. Superior Oil Co. which has established several drilling records in the Rio Bravo field is conforming with precedent by drilling 4,775 feet of hole in the Southeast Coalinga field in eight days in No. 1 Cagle in Section 6-20-16.

Atlantic Refining Co. Will Drill in Cuba

PHILADELPHIA, Pa., Dec. 5.—Atlantic Refining Co. has shipped drilling equipment from the Hardin field, Texas, to be employed in drilling operations in Santa Clara Province, Cuba. The equipment will be taken by rail to New Orleans where the freight cars will be run onto a sea ferry for the passage to Havana. From Havana the equipment will be transported by rail and truck to the site of operations.

Atlantic holds titles to several hundred thousand acres in Cuba. Since last spring, following new petroleum legislation by the Cuban Congress, the company has been carrying on an extensive program of seismographic and scientific work to determine the most promising locations. The company had been carrying on for the past five years a study of the island's petroleum possibilities, employing a large staff of geologists and geophysicists, but it was not until the passage of the new legislation that it felt justified in assuming the risks and expenditures of exploratory drilling.

Under the old mining laws of Cuba, no separate consideration was given to petroleum. The usual safeguards, such as royalty payable to the government, taxation over a reasonable exploitation period, the right to appropriate the necessary surface areas together with the right to construct pipe lines and other necessary installations, were entirely lacking or were so ambiguously expressed as to require legislation to correct deficiencies. The new petroleum law for the first time gives reasonably satisfactory guarantees to foreign capital to encourage petroleum investments in that country.

Since the beginning of the century oil geologists have on various occasions studied the possibility of commercial oil deposits in Cuba's lower Cretaceous (chalk) region, with more or less negative results.

Richfield Oil Corp. officials present at discovery of new oil field in Tupman area: W. T. Dinkins, vice president; M. R. Gross, treasurer; M. E. Morris, production superintendent at Ventura; C. R. McKay, W. T. Autrey, comptroller; H. H. Kelly, purchasing agent; R. W. Ragland, attorney for company; Hugh M. Gallagher, personnel manager; Al Donnelly, field superintendent; H. T. Boggs, general superintendent; N. F. Simmons, land and lease department; Albert M. Kelley, vice president; Frank Morgan, vice president; R. D. Montgomery, in charge of exploitation, and Roy Carver, land and lease department

Kansas directors of the Independent Petroleum Association of America present at the annual state meeting of the association in Wichita: Eben W. Pyle, Wolf Creek Oil Co., Wichita; A. S. Ritchie, McPherson Drilling Co., Wichita; Ralph Pryor, Pryor & Lockhart, Inc., Wichita; T. C. Johnson, Wichita; E. C. Moriarty, Derby Oil Co., Wichita; George P. Dickey, Dickey Oil & Refining Co., Wichita; W. F. Hopper, Hutchinson; R. A. Clymer, The Eldorado Times, Eldorado; W. L. Hartman, Hartman-Blair Oil Co., Wichita; E. B. Shawver, Shawver Petroleum Co., Wichita; A. E. Lloyd, Lloyd-Frost-Study Oil Corp., Wichita; D. R. Lauck, Lauck & Moncrief, Wichita. Mr. Lauck is vice president of I.P.A.A.

STATE CAPITALS

TEXAS

FIELD RULES FOR THE WASSON POOL of Gaines and Yoakum counties, West Texas, were adopted last Friday in a special order by the Railroad Commission which limited drilling to 330 feet from property lines and 770 feet from another well. Twenty-acre proration units were prescribed with the field allowable allocated one-half on acreage and one-half on average unit potential. The order also provided that at the election of the operator the well density may be kept to one well to 40 acres, in which event the 40-acre tract would receive twice the acreage allowable allocated to a 20-acre unit. A gas-oil ratio limit of 5,000 feet per barrel was prescribed. Method of determining 24-hour potential provided that it should be taken through tubing not larger than 2½-inch and based on the last three hours of a six-hour flow.

INDEPENDENT SWEET GAS PRODUCERS of the west Panhandle field renewed their battle last week for a proration order which would give them some share in the major pipe line companies' market. Arguments before the Railroad Commission were completed but the hearing was recessed until December 12 in order that new data may be gathered.

THE COMMON PURCHASER ACT is being used by the Railroad Commission in an attempt to force the integrated companies to take ratably from all fields. Humble Oil & Refining Co. recently asked Barnsdall Oil Co. to find other purchasers for its production in the Flour Bluff field and certain parts of West Texas. As a result Humble was charged with violation of the Common Purchaser Act and asked to appear at the statewide proration hearing on December 12 to show why it should not take ratably. The charge was in a letter from commission Chairman E. O. Thompson and implication was made that if Humble could not continue to purchase oil from Barnsdall in Flour Bluff, then Humble wells in the field should be shut in and that Humble's own production should not be delivered to Humble Pipe Line Co.

JUDGE R. E. SLOAN of Topeka, Kans., chairman of the Kansas Corporation Commission, said at Dallas that leaders in the Interstate Oil Compact had agreed that the compact should be preserved.

Judge Sloan, chairman of a committee which met in Dallas, said an agreement had been reached on legislative recommendations.

He said that the matters which came under consideration included the advisability of naming a federal authority to allocate production between states and the possibility of bringing refiners into the compact.

The committee decided to meet again in Austin on December 12.

EASTERN STATES PETROLEUM CO. has been invited to attend the statewide oil proration hearings in Austin, Tex., on December 12, for the purpose of clarifying the situation regarding importation of Mexican crude oil.

The company says the Mexican crude it imports at the rate of 15,000 bbls. per day is from nonexpropriated oil fields developed, owned and operated by the Mexican Government. This is refined at the company's Houston refinery and the products sold exclusively in the export trade.

Vice President Louis J. Walsh will represent the company at the hearings. He will point out the importation of Mexican oil by his company represents 1 per cent of the total production in Texas.

THE TEXAS RAILROAD COMMISSION cut Rodessa production from 32,655 to 29,999 bbls. daily, according to the proration schedules announced for the month of December. The figure includes production in Cass and Marion counties.

CALIFORNIA

CALIFORNIA'S DAILY ALLOWABLE production for December has been set at 610,500 bbls. per day with a tolerance of 5,000 bbls. daily by the Central Committee of California Oil Producers and thus again the permissible allotment has gone unchanged despite the advent of lower consumption and the establishment of the consumptive demand for California as 589,700 bbls. per day by the Bureau of Mines. The bureau's data for December is more nearly in line with the normal expectancy despite the larger allotment set by the central committee.

KANSAS

PROPONENTS OF SPECIAL KANSAS OIL allowables pressed their case before the Corporation Commission with testimony that such allocations were vital to independent refiners and would not affect crude prices nor cause waste. Following completion of testimony at this session, the hearing was continued to December 17 for final arguments.

Special allowables sought in several pools are opposed by Skelly Oil Co. and the Kansas Independent Oil and Gas Association on the contention they would depress crude prices and cause waste.

Opponents of special allowables introduced testimony that granting of production in excess of log-log allocations would cause eventual waste.

"Allowance of production from Arbuckle lime oil wells in western Kansas in excess of 10 per cent of per well potential will cause economic waste through failure to obtain maximum ultimate recovery," Colin C. Rae, Tulsa, petroleum engineer in charge of production for Skelly Oil Co., testified.

ARKANSAS

ARKANSAS BOARD OF CONSERVATION announced its statewide proration schedule for December, fixing the following allowables: South Miller County, Rodessa, "lower Gloyd," 4,552 bbls. daily; Schuler, Jones sand, 14,568 bbls. daily; Schuler, Reynolds lime, 1,501 bbls. daily and Buckner, 1,600 bbls. daily.

The allowable set for the Schuler Jones sand will continue throughout the month of December, and the total figure has been set, taking into consideration those wells which will be placed in production during the month, making the overall monthly average production approximately 15,000 bbls. daily.

85 PER CENT GASOLINE OF 81 OCTANE FROM GAS OIL

By W. T. Ziegenhain

A catalytic cracking unit of simple design and operating procedure may be seen at the Riverside, Ill., research plant of the Universal Oil Products Co. The unit is of semi-commercial capacity but large enough to have served as the basis for the design of several large commercial units which are to be constructed within the next few months. This unit proved to be of unusual interest to many refinery engineers and operators who attended the recent annual American Petroleum Institute meeting in Chicago because of its ability to produce 85 per cent gasoline of 81 octane number from Mid-Continent gas oil.

This yield of course is based upon a recycle operation but the extent of recycling is well within commercial practices on thermal cracking units. This yield also includes that from catalytically polymerizing the cracked gases, 95 per cent of which may be polymerized as they leave the catalytic cracking plant. A typical cracked gas analysis follows:

CRACKED GAS ANALYSIS

H_2	= 15.9%
CH_4	= 18.5
C_2H_4	= 4.8
C_2H_6	= 5.2
C_3H_6	= 21.5
C_3H_8	= 5.1
C_4H_8 (iso.)	= 8.8
C_4H_8 (nor.)	= 12.3
C_4H_{10}	= 5.0
O_2	= 0.3
CO	= 0.6
N_2	= 2.0

The balance of yield is represented by 6 per cent residue oil of 25-gravity and about 9 per cent unpolymerizable gas and loss.

The 85 per cent gasoline fraction contains monoolefins and is stable with respect to color, octane value and is about 10 pounds vapor pressure.

As an alternate operation the unit may be run to produce up to 5 per cent isooctenes on a single-pass basis or 12.5 per cent in a recycling operation. The isooctene fraction may be hydrogenated to isooctane gasoline. If the latter is recovered by hydrogenation of isooctenes as a specialty product, the balance of the motor fuel production of about 73 per cent by volume will be about 81 octane number.

The Riverside plant essentially consists of a heater, catalyst reactor, and automatic controls for alternating the flow of stock through the furnace and reactors while another section is utilized for reactivating the catalyst. The cycle is about 40 minutes in duration.

At the time the writer visited the plant a Mid-Continent gas-oil of the following characteristics was being charged.

GAS OIL CHARGING STOCK

Gravity A.P.I.	36.7
I.B.P.	407° F.
E.P.	750° F.
Pensky-Martens flash	163° F.
Cold test	30° F.
Viscosity at 100° F.	40 sec.

Distillation Range

10%	460° F.
50%	552° F.
90%	687° F.
98%	750° F.

While this stock may be typical of the material readily available for processing in large quantities it should not be understood that operation of the unit is limited to gas oils nor to overhead stocks. In fact, twenty types of charging stocks have been investigated for the purpose of selecting the most practicable catalyst and the range of stocks tried has extended from Kettleman Hills, Calif., residuum to Pennsylvania gas oil. Highly paraffinic overhead distillates are favored.

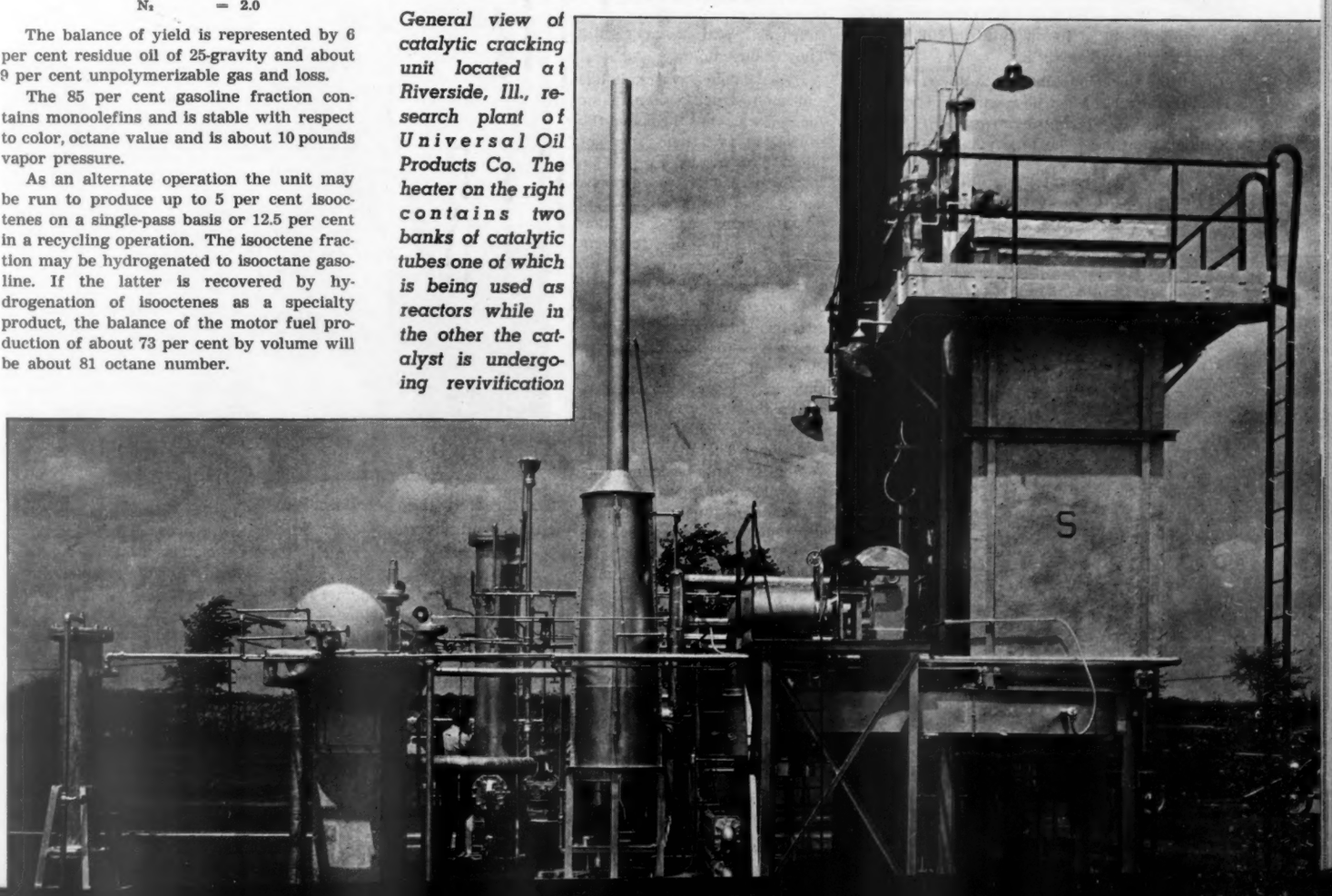
The catalytic cracking unit may be described as banks of catalyst reactors with automatic controls provided to alternate the flow of heated oil first through one-half of the catalyst reactors and then through the other while the catalyst in the first reactors is being activated.

In the Riverside unit a pressure of 15-pound gauge is adequate to process the charge. No additional pressure is utilized to influence the reaction.

The catalyst used appears to be exceptionally rugged. The extensive fundamental research done by Universal in the development of catalytic polymerization has aided in the selection of an appropriate catalyst for catalytic cracking and at the time of the writer's visit at Riverside the same catalyst had been in continuous use for 9 days, and previous laboratory tests showed practically complete recovery upon revivification of the catalyst over long periods of time.

Revivification is accomplished by burning off the carbon which collects on the catalyst and this in turn simply necessitates passing a predetermined amount of air through the tube and maintaining a moderate temperature of combustion. The burning progresses through the reactors under automatically controlled conditions.

Prior to burning the carbon from the reactors they are purged of oil vapors for a period of about 30 seconds.



General view of catalytic cracking unit located at Riverside, Ill., research plant of Universal Oil Products Co. The heater on the right contains two banks of catalytic tubes one of which is being used as reactors while in the other the catalyst is undergoing revivification

This Man THOMPSON

By T. F. SMILEY

"It's none of their business!"

And Col. Ernest O. Thompson, red-headed champion of state rights, specified the kind of business it wasn't.

The colonel, chairman of the Interstate Compact Commission and of the Texas Railroad Commission, the man who instantly comes to mind when they speak of the Lone Star State's first citizens, was answering a question as to how the other oil-producing states viewed Louisiana's heavy tax on crude production.

"None of their business." It was symbolic of the sanctity with which Colonel Thompson invests the right of a state to be the architect of its own fortune—whether the architecture is faultless or abominable being entirely beside the question. For, understand, there is no reason for believing Louisiana's management of its oil industry fills Colonel Thompson with passionate joy.

One thing the colonel detests to the core of him is federal control of what he regards as state functions. It means paralyzing regimentation, a stifling economic atmosphere, he tells you. And with all the ardor of his fiery soul he hates the idea of federal control of the oil industry.

Repeatedly this aversion to governmental meddling flamed out during the 85-mile drive from San Antonio to Austin. The colonel was in the back seat with his questioner. Major Walton Hood, chief enforcement officer of the transport division of the Texas Railroad Commission, was at the wheel. Incidentally the major has the reputation of being as skillful a driver as ever guided a car over the ribboned highways of Texas.

"Right there is a perfect example of what federal control can do to a business," the colonel exploded suddenly, pointing to the railroad track paralleling the highway. "The Government dominates the railroads. With what result? They're busted."

"But, colonel, wasn't it bus and motor-truck and airplane competition that brought the railroads to their present plight?" he was asked.

"Sure. But if the railroads hadn't been hogtied by the Interstate Commerce Commission they would have met the competition promptly and a flood of receiverships would have been averted. They would have established truck and bus lines themselves as auxiliaries to their rail lines. They could have installed air service too. That's the way competition is met in other fields."

Colonel Thompson referred to oil as the only basic industry that had fought its way through a decade of business demoralization without a serious scar.

"Which is evidence," he added, "that with all its mistakes, the oil industry has no reason to hang its head."

"It is to our everlasting credit," he went on, "that we escaped federal control back in the delirium of the NRA. Oil men were swarming to Washington, wailing, 'Save us!' It looked like the end of state sovereignty. There was no urge for federal control from the people. It all came from the frightened oil men. It's the unknown that scares folk, you know. I fought against the blow that threatened. I contended that the mere production of oil and running it into a tank is not commerce. And, if it is not commerce, then it certainly can't be interstate commerce. And if it isn't interstate commerce, then Congress has no right to touch it. If lifting oil from the earth is commerce, then clipping wool from a sheep's back is commerce and raising corn is commerce."

He directed the heaviest machine gun barrage ever laid down by any army

It must not be supposed that Colonel Thompson is not wholeheartedly in favor of cooperative action by the oil-producing states to conserve a natural resource and to stabilize markets. If he were not he wouldn't be chairman of the Interstate Compact Commission. He insists it is the right of each state to decide for itself whether to enter the compact, not something to be done by command from Washington. "Let's not have government by fear, but by common consent."

The compact came about, the colonel said, as a result of recognizing the need of conservation and market stabilization, and recognizing too that some form of concerted action was imperative. "The compact is, in effect, a treaty between sovereign states, formed with the president's approval and the consent of Congress, to prevent waste."

Commenting on the fact that the Compact Commission is without authority to enforce its recommendations, Colonel Thompson said: "It is true, as critics of the compact point out, that it has no power. And therein lies its strength. You can't force a sovereign to do anything. You can't put a state in jail. But sovereigns can talk things over, and you can get reasonable minds together. That's what the compact does."

Colonel Thompson brought to the Compact Commission, of which he is credited with being the guiding spirit, a wealth of experience gained as a member of the Texas Railroad Commission. He was mayor of Amarillo—the "fighting mayor," they called him, because of his driving energy in achieving reforms and saving money for taxpayers—when, in June, 1932, he was appointed to the commission. He took the place of Pat M. Neff, who had

Will Rogers said the colonel made "the best chili in the country"

resigned to become president of Baylor University. The next month he was elected to the post, and he has held it since.

The East Texas field, in a frenzied race for oil without regard to waste or market demand, had upset the world's economic and price structure of petroleum. Texas was losing millions of dollars daily as a result of the production orgy. The state government and the schools were losing revenues from petroleum. The people watched their great natural resource being wasted. Martial law and a called session of the legislature were among measures adopted in the hope of effecting lawful production control. Enormous traffic in "hot" oil presented a baffling problem. Many stubbornly resisted attempts at control.

Orderly Development Effected

This was the situation which Colonel Thompson faced when he joined the Railroad Commission. The first requisite was to write orders which would stand up in the courts. Furious attacks were being made by those who objected to regulation. Oil dropped to 10 cents a barrel. Then the legislature and the commission, guided by court decisions, began to write orders which stood the test of constitutionality. Orderly development gradually was effected. And the credit for it is accorded largely to the administrative ability and tireless application of the bronze-topped crusader from Amarillo.

"There's good engineering in East Texas now," remarked the colonel. "They have restored some of the bottom-hole pressure that was lost during the period of crazy production. We don't let any wells gush in this state any more. If only we could stop the politicians!"

But out of the East Texas imbroglio came the attempt to give the federal Government control over the state's oil production. Another fight was on. Colonel Thompson led the forces opposed to federal control, and won. From that conflict emerged the Interstate Compact Commission, which includes Texas, Oklahoma, Kansas, Colorado, New Mexico and Illinois. It cannot fix prices, but it fosters coordination of oil production in the states so as to prevent waste and to establish stable conditions.

If you didn't happen to know that Colonel Thompson is a lawyer by profession, you might easily suppose him to be a petroleum engineer, a person by the way, whom he defines as a geologist who has seen an oil well. He discusses bottom-hole pressure, rate of flow, and various matters of production technique with the readiness of an engineering graduate.

"How do you do it?" he was asked.

"Well," he smiled, "some of the best engineers in the country appear at our hearings. I listen to them intently, and I study the principles that underlie it all. I read the petroleum publications regularly. So I have absorbed quite a lot of information about oil and gas production and related subjects." He referred to the Railroad Commission as a "fine blending of administrative law and engineering."

Significant of the rating which Colonel Thompson has attained as an administrator of oil affairs is the fact that he was selected by President Roosevelt to represent the United States at the World Petroleum Congress in Paris last year.

He was earnest in his praise of the manner in which scientific discoveries and advances in production methods are used for the common good in the oil industry. In no other, he declared, is there such absence of secrecy. Engineers and geologists of competing companies hold technical meetings at which they discuss their investigations and experiments with the utmost openness.

Colonel Thompson is not one of your view-with-alarmers. Nobody believes more whole-souledly than he in conservation, in developing fields in accordance with sound engineering principles, and in keeping production in balance with needs. But he isn't one to be scared by goblins at night. (Or what he at least believes are goblins.)

"In 1925 we received the doleful news that there was only five billion barrels of oil in sight. We were going to run out of it. What would we do for gasoline? Well, since then we have used 11½ billion barrels of crude, we have 15½ billion more in definitely known reserves, and we are getting about twice as much gasoline from a barrel of crude as we did then. Our problem today is not where to find oil, but where to market what we've already found. They used to talk that way about coal. Today coal mines have sunk to such a low estate that before long you can buy them at the 5 and 10. Long before we have exhausted our oil supplies our scientists will have given us a new motor fuel. Oh, you won't have to scrap the family car.

"Why, think of it," he went on. "In Texas we bring in a new well every 45 minutes. We've been doing that on an average for the last two years. We go to bed thinking we've got this overproduction thing all settled, but when we wake up in the morning we find a dozen more wells were brought in while we slept.

"The latest figures I have give Texas 84,000 wells. But while we are driving from San Antonio to Austin," he chuckled, "the score climbs to 84,002."

The colonel hastened to make it clear that this steady ticking off of well completions carried with it no hint that a natural resource was being wasted.

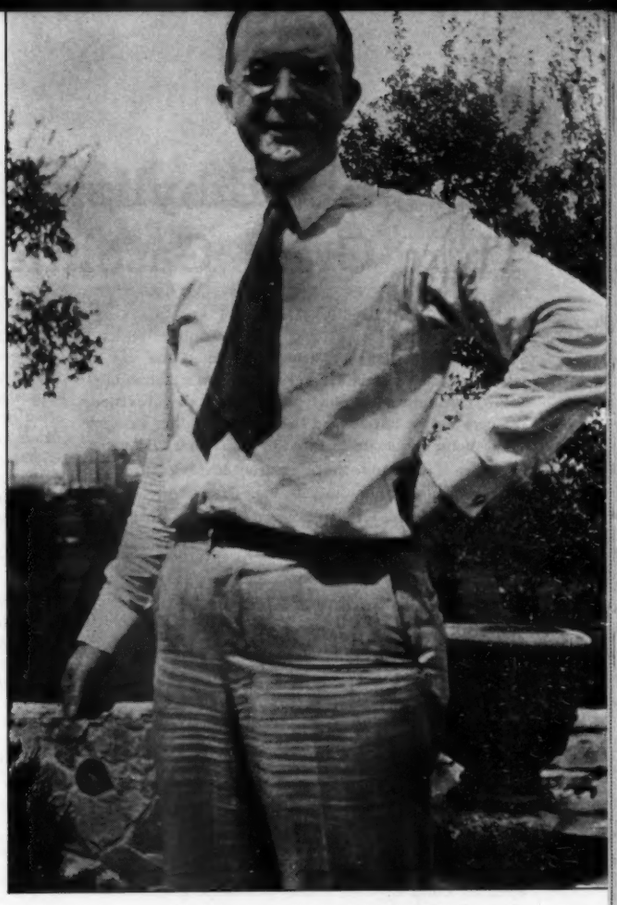
"Everybody is worrying about Texas," he snapped. "They want to regulate us. The fact is Texas offers a model for other oil-producing states in point of orderly production. We are producing far less in Texas than we could produce, if we were minded to do it, without physical waste. Instead of the million and a quarter barrels that we are taking out of the ground daily, we could lift three million barrels without excessive physical waste. We are curtailing our production to such a degree that we are approaching a time when it may take 10 to 15 years for a well to pay out. Why worry about Texas? They talk of the need of conserving our oil for possible need in national defense, and that is something that must not be overlooked. But don't forget that there is available in Texas alone, at the turn of a tap, eight billion barrels of oil."

What Could an Umpire Do?

The subject of a federal oil umpire was tossed out sort of tentatively, just to see if anything would happen. It did. Colonel Thompson emitted something like a growl.

"Federal umpire? What in blazes do we want of a federal umpire? What could a federal umpire do? He could have no power. An umpire in a baseball

(Continued on Page 32)



At home—and comfortable

Mrs. Thompson accompanied him to the A.P.I. convention in Colorado Springs

He and his mother, Mrs. L. O. Thompson, visit his birthplace in Alvord, Tex.

Authorize Ethylizing of Third Grade Gasoline

NEW YORK, Dec. 6.—The Ethyl Gasoline Corp. has waived provision of its "Q" license contract entitled Subdivision D, Clause 1, which restricted the use of tetraethyl lead thereunder to the grade of gasoline next below premium motor fuel. By waiving the provision, the corporation has opened the field of leading gasoline to all motor fuel manufactured by its refinery licensees.

There is no change in the contract involving grade of "Q" gasoline or premium gasoline.

It is understood that Standard Oil Co. (Indiana) is preparing to introduce a third grade gasoline in its territory containing lead. It is anticipated that other marketing companies will take advantage of the opportunity to improve the quality of their third-grade gasolines which have become a highly important competitive product in certain areas. At present these third-grade gasolines vary in octane specifications from 40 to 65 plus, which is reflected in the performance of engines. It is believed that the action of the Ethyl corporation will tend to reduce the sale of those fuels which have an extremely low octane rating.

Kansas 15-bbl. Allowable Has Been Discarded

The Kansas Corporation Commission discarded the 15-bbl. basic allowable method of crude oil allocation at a hearing held in Wichita.

Chairman E. R. Sloan said the case would be continued until December 8, when evidence would be received as to the equitable character of the ruling. The discarded rule had been in effect since October 1 and placed prorated wells on a minimum basis of 15 bbls. per day and redistributed the remaining proratable oil above that figure.

Testimony was heard at the hearing on special allowables as Colin C. Rae, Tulsa, petroleum engineer for Skelly Oil Co., was questioned by attorneys and representatives of applicants for special allocations. Amplifying his earlier testimony regarding the economic waste that would result from too rapid rate of withdrawal from oil reservoirs, Rae said it would cause water-coning, disturb water-oil equilibrium, and cause premature flooding of the oil zones.

Sohio Cuts Runs Per Well In Many Illinois Pools

CENTRALIA, Ill., Dec. 5.—Sohio Pipe Line Co. (Standard Oil Co. of Ohio) effective December 4 at 7 a.m. made the following reductions in its average daily runs per well in Illinois fields in which it buys crude oil: Centralia, from 25 bbls. to 20 bbls.; Salem, from 50 bbls. to 30 bbls.; Dix, from 35 bbls. to 30 bbls.; Louden, from 40 bbls. to 30 bbls.; and in Ina, Clay City, Noble, Olney, Flora, Fairfield and Burnt Prairie, from 75 bbls. to 40 bbls.

A meeting of oil producers will be held in this city Friday, December 9, at which Lieut. Gov. John Steele will be the principal speaker.

Muskogee Pure Oil Refinery to Close

George T. Yost, superintendent of the Pure Oil Co., Muskogee, Okla., refinery, announced the plant had been ordered shut down "for an indefinite period" within the next 60 days. The plant had a daily capacity of 9,000 bbls. Approximately 135 employes will be affected.

Osage Sale Nets $15,900

The auction sale of oil leases in Osage County, Oklahoma, held on December 6, at Pawhuska, netted the Indians only $15,900. Sixty of the 79 tracts offered were snapped up at prices ranging from $100 per tract upwards.

Pipe Line Proration Still In Effect in K.M.A. Field

FORT WORTH, Tex.—Pipe line proration was still in effect in the K.M.A. field although December 1 had been tentatively set by Texas Pipe Line Co. to put into effect its plan of increasing its takings from 80 to 100 per cent of their allowable. Indications were that 100 per cent takings would soon be restored as the pipe line companies serving the field continued their efforts toward that end. Gulf Pipe Line Co. has taken over about 50 connections from Texas company, the major purchaser in the field, and Continental Pipe Line Co. and Magnolia Pipe Line Co. are studying the possibility of taking over an additional 75 well connections from Texas company.

When urged by the Railroad Commission to restore 100 per cent buying in the field, Texas company agreed to do so if the other companies in the field would take over approximately 125 of its present connections. Including pipe line proration and two-day shutdowns, K.M.A. wells are being reduced to 23.5 bbls. daily compared with their basic allowable of 32 bbls. daily set by the commission.

Sadler Seeks Information On Texas Shutdowns

AUSTIN, Tex.—Jerry Sadler, railroad commissioner-elect, said Friday he would seek a thorough investigation of the Saturday-Sunday shutdown method of curtailing oil production before determining his view on the program.

Mr. Sadler's announcement was intended to clarify any opinion that he might be for or against the plan which has been invoked by Chairman E. O. Thompson and Commissioner C. V. Terrell. Commissioner Lon A. Smith, with whom Mr. Sadler has sided in announcing three forthcoming appointments, has objected to the shutdown method. He refused to sign the December order although he approved the October and November orders.

"If it takes a day or 30 days," said Mr. Sadler, "I want to learn all I can about it before making up my mind." He explained there were phases which he believed had not been inquired into thoroughly.

One of the things on which he will seek information, Mr. Sadler said, is importation of crude from Louisiana. He said he had "enough data on this to ask a lot of questions," and wanted to determine how much crude is coming in from that source.

East Texas Proration Case Is Postponed

Trial of the Rowan and Nichols case attacking the East Texas proration order has been postponed by agreement until the January term of federal court. It had been scheduled for December 3, at San Antonio.

Texas Legislators Oppose New Oil Commission

AUSTIN, Tex.—A bill is expected to be offered at the January session of the legislature to establish a new oil and gas commission, but 10 members of the legislature declare there is no occasion for such a plan.

Three members of the Senate finance committee, which has been investigating departments and their costs, expressed disapproval.

"There is no provocation for the creation of an oil and gas commission," Chairman Redditt said. "And efforts to pass such a bill would have all the flavor of trying to use the legislature to satisfy a political grudge."

According to the legislators, the commission has been doing a good job in stabilization of the oil industry.

"And what is more," Representative Celaya said, "G. A. Sadler, who will go on the commission in January, is a conservative, is experienced in the oil business and will give an excellent account of himself. The commission is lucky to have him."

Obituaries

E. HAMILTON SLOAN, 94, oil pioneer, died last week at Grove City, Pa. He was well known in Pennsylvania in the early days, having engaged in operations in Venango, Butler, Armstrong and Greene counties. He also was one of the early operators in the industry in West Virginia, Kansas and Oklahoma. He was born near Mercer, Pa., December 17, 1845.

CARL R. TILLMAN, superintendent of the Glenrock-Parkerton refinery of Continental Oil Co., died at the wheel of his automobile when it left the Yellowstone Highway, east of Casper, November 30.

FRANK J. HUFFMAN, 60, first vice president and comptroller of South Penn Oil Co., vice president, Penn Mex Fuel Oil, and a director of Pennzoil and Clayco Gas companies, South Penn subsidiaries, died suddenly December 2, in the Mercy Hospital, Pittsburgh. He was stricken while driving his car in Pittsburgh, accompanied by Mrs. Huffman and Louis H. Johnson, president of Pennzoil Co. of California, and Mrs. Johnson. He was born in Delmont, Westmoreland County, Pennsylvania, February 3, 1878, and began his employment with South Penn Oil Co. in July, 1900. He was elected assistant treasurer in November, 1918; appointed assistant to the vice president in January, 1921; vice president in October, 1923, and vice president and comptroller in May, 1931.

THE MARKETS*

CRUDE OIL: *Heavy withdrawals from stocks are imparting a somewhat better tone to the crude market. Although production in Illinois, Indiana, and Louisiana continues to seek outlets at concessions, it is believed there has been no increase of consequence in the past week of offerings at less than posted prices. Humble Oil & Refining Co. announced discontinuance of postings for grades higher than 40 gravity. Magnolia Petroleum adopted the same course.*

REFINERY: *Colder weather is stimulating the call for furnace oils and at the same time slackening the demand for gasoline, although movement of the latter product is higher than had been expected. Natural gasoline rose another quarter-cent, making current quotations .75 cent above those of a month ago. Heavy industrial fuel is recording further gains, especially in the East and Gulf Coast, with prices much firmer.*

TANK-WAGON AND POSTED DEALER: *Socony-Vacuum reduced tankcar consumer prices throughout most of its territory .5 cent and tank-wagon dealer prices .5 cent in metropolitan New York, 1.5 cents in Syracuse and 1 cent in Boston. Scattered changes in other areas, and prices generally fairly well maintained.*

FINANCIAL: *Oil shares, like most other issues, moved in a narrow range and went lower than the week before. Selling for income tax purposes was apparently a depressing factor. Average of 30 representative stocks for week ending December 3: High, 28.79; low, 27.63; close, 28.14. Week ending November 26: High, 29.02; low, 28.07; close, 28.41.*

**Detailed information in Market Section.*

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Established 1910 by PATRICK C. BOYLE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Encouraging

The report that oil company executives invited by the Texas Railroad Commission to attend the allowable hearing at Austin next week have accepted is further proof of the present prevailing spirit of cooperation within the industry.

For some time it has been evident that progress has been made in many directions as a consequence of greater readiness to consider one another's problems from the standpoint of the welfare of the oil business as a whole.

The crude situation, with the exception of Illinois and California, has been gradually improving. Particularly, there has been a definite strengthening in cargo business.

The pipe line proration situation has been cleared up to some extent, also evidencing the better understanding.

The conference at Austin comes at an opportune moment. It is not too much to say that the whole crude situation will depend upon the decisions taken in regard to the January allowable in Texas.

The industry expects that the order will be in line with the present figures so that the constructive movement will continue in the new year.

Renewed industrial fuel demand is another result from the pickup in industry which will be felt also in all petroleum products.

The 40 per cent increase in sales expected by automotive manufacturers in 1939 cannot fail to be reflected in the motor fuel market.

The estimated 15 per cent increase in domestic heating requirements is being sustained by reports on consumption during the frigid spell in the East and reductions in overhanging stocks.

These favorable indications, however, should not be overplayed in planning operations during the winter.

Crude runs to stills should be kept closer to the limit of 3,100,000 barrels daily which has been calculated as a safe total.

With gasoline stocks around last year's figures at this time, unwise excess in production during the winter might easily exceed any demand that could reasonably be expected.

All these considerations will, no doubt, have due weight in the three meetings to be held next week, the Texas allowable hearing, the I.P.A.A. Committee of 36 conferences, and the meeting of the Interstate Oil Compact Commission.

The meeting of the executives and the Texas Railroad Commission, conducted in a spirit of mutual helpfulness, should be productive of substantial benefits to the industry.

The conservation movement has been built upon the cooperation between the industry and the regulatory authorities of the states. The continuation of the Interstate Compact will be affected by the impression Congress gets of its workings and possibly the attitude of the other oil-producing states.

If those within the compact continue, under the leadership of Texas, to demonstrate that the conservation policy is workable and effective, it must attract the others and strengthen the demand for favorable action by Congress.

The present disposition within the industry to come together to seek a solution of common problems, coupled with the improving conditions and outlook, encourages belief that 1939 will prove a favorable year for the oil business.

The meetings at Fort Worth next week should give an impetus to that end.

Programs and Meetings

Meetings of Refiners at Houston Oil Show

Four days will be devoted to discussion on refinery equipment and its application in meeting plant problems during the Oil-World Exposition in Houston from April 24 to 29, inclusive. These technical meetings will

W. H. CURTIN

be under the direction of the refinery committee of which W. H. Curtin is chairman.

The program has been divided into four sections, one day to each section. The meetings will begin at 9 a.m. and adjourn for lunch; reconvene at 1:30 p.m. and adjourn for dinner; and will be continued from 7:30 to 9:30 p.m. Each section will be under the supervision of a subcommittee with a subchairman in charge. The committees and subjects follow:

Chemists Program — Tuesday, April 25: K. H. Clough, subchairman, W. H. Curtin & Co., Inc.; F. W Jessen, Humble Oil & Refining Co.; A. R. Rickards, Sinclair Refining Co.; E. W. Gardner, Texas Co.; W. F. Fulton, United Gas Co., and J. H. Tabony, Crown Central Petroleum Co.

Instrument Program—Wednesday, April 26: R. L. Mallory, subchairman, Brown Instrument Co.; Joe Peddie, Maintenance Engineering Corp.; L. G. Marsh, Taylor Instrument Co., and G. B. Lane, Foxboro Co.

Heavy Equipment Program—Thursday, April 27: M. N. Dannenbaum, subchairman, M. N. Dannenbaum Co.; Joe Miller, Humble Oil & Refining Co.; H. M. Stewart, Humble Oil & Refining Co., and Philip Darling, Pan American Refining Corp.

Process Program—Friday, April 28: George Reid, subchairman, The Refiner; O. E. Berg, Babcock & Wilcox Tube Co., and Karl E. Luger, Carnegie Illinois Steel Co.

Mid-Continent Association Taxation Committees Meet

DALLAS, Tex.—Taxation as applied to the oil industry and the present status and future possibilities of governmental levies were discussed by the tax groups of the Mid-Continent Oil and Gas Association at its annual meeting. Plans for the coming year were considered by the committees on state and local taxation and on federal income and excise taxes. The group selected Houston, Tex., as next year's meeting place and named new committee chairmen.

The new general chairmen are: H. L. Stone, Humble Oil & Refining Co., Houston, on local and state taxation; and W. Leo Austin, Mid-Continent Petroleum Corp., Tulsa, on federal income and excise tax. J. A. McNeese, Continental Oil Co., Ponca City, Okla., was elected vice chairman of the federal group, and Dan D. Harley, Ohio Oil Co., Tulsa, vice chairman of the state group.

J. C. Hunter, vice president of the Mid-Continent Oil and Gas Association, Abilene, Tex., opened the session Thursday with an address of welcome. This was followed by the committee reports, with W. Leo Austin presiding. Friday morning the speakers included W. L. Clark, Tulsa, on "Last In—First Out Method of Inventory Pricing"; Darlene G. Anderson, Bartlesville, on "Basic Court Decisions Affecting Taxation," and Jake L. Hamon, Dallas, on "Texas Oil Taxes."

Several changes were made in subcommittee chairmen and a new steering committee was added under the state unit. A. J. Wells, Tulsa, was made head of that group, styled steering committee for Illinois, Indiana, and Kentucky. Other new committee heads are O. C. Cash, Tulsa, for Oklahoma; C. A. Nail, Bartlesville, for Kansas; John P. Morgan, Dallas, for Texas; J. D. Nelson, Dallas, outside states ad valorem, and Mr. McNeese, outside states excise.

New members of the executive committee for the federal group are L. S. Collins, Tulsa; E. P. Hagaman, New Orleans; H. C. King, Findlay, Ohio; Raymond Parr, Bartlesville; R. L. Tollett, Fort Worth, and O. W. Meyers, Tulsa. Mr. Meyers replaced Gay Carroll, Houston, as head of the excess profits and capital stock taxes group, and R. M. Chan, Dallas, replaced Newton Montgomery, Bartlesville, social security tax group.

Texaco Old Timers Club Holds Houston Session

HOUSTON, Tex., Dec. 5. — Recognition for "long and faithful service" with their company was given members of the Old Timers Club of Texas Co. and Texas Pipe Line Co. at the second annual banquet at Houston, Saturday night, December 3. Membership now totals 144, consisting of those who have been in the service of these companies 25 years or longer. Similar banquets are held by Old Timers at New York, Port Arthur, Dallas, Tulsa, Chicago, Lawrenceville, Jacksonville, Denver, and Los Angeles.

In the awards this year were four for 36 years of continuous service, five for 35 years, two for 34 years, five for 33 years, eight for 32 years, 10 for 31 years, 14 for 30 years, 15 for 29 years, 17 for 28 years, 18 for 27 years, 17 for 26 years, and 29 for 25 years. Special recognition was paid T. J. Donoghue, executive vice president, the only active employe with the company since its inception in 1902. Also attending the banquet was John C. Colligan, of Pennsylvania, who until his retirement this year was the oldest man in point of service with the company. He, with Mr. Donoghue, Ira McFarland, comptroller, and Guy Carroll, treasury department, were the four who received awards for 36 years of continuous service.

A. S. Bailey, vice president, Texas Pipe Line Co., a 27-year man, was elected president of the Old Timers Club to succeed V. R. Currie of the personnel department. Other new officers elected were: Vice presidents, W. R. Ellwood, sales department; F. C. Jones, refining department, and C. C. Shields, producing department; treasurer, G. W. Foster, legal department; secretary, R. J. Topliffe, producing department.

Besides Mr. Currie, the retiring officers were: Vice presidents, V. L. Porter, producing department; M. C. VanGundy, refining department, and C. W. Redman, comptroller's department; treasurer, A. R. Megarity, sales department; secretary, P. A. Angenend, pipe line company.

CALENDAR

December.

POWER & MECHANICAL ENGINEERING, thirteenth national exposition, Grand Central Palace, New York, December 5-10.

PETROLEUM ELECTRIC POWER CLUB, tenth annual conference, Mayo Hotel, Tulsa, December 8 and 9.

WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION, annual meeting, Abilene, Tex., Dec. 10.

TEXAS RAILROAD COMMISSION, statewide hearing, Austin, Dec. 12.

I.P.A.A. COMMITTEE OF 36, Fort Worth, Tex., Dec. 13.

INTERSTATE OIL COMPACT COMMISSION, quarterly meeting, Fort Worth, Tex., Dec. 14-15.

January, 1939.

SOCIETY OF AUTOMOTIVE ENGINEERS, annual meeting, Detroit, Mich., Jan. 9-13.

February.

NATIONAL ASPHALT CONFERENCE, Los Angeles, Calif., week of February 27.

March.

AMERICAN SOCIETY FOR TESTING MATERIALS, committee week and regional meeting, Deshler-Wallick Hotel, Columbus, Ohio, Mar. 6-10.

INTERNATIONAL ACETYLENE ASSOCIATION, 39th Annual Convention, Houston, Tex., March 8-10.

INDIANA INDEPENDENT PETROLEUM ASSOCIATION, spring convention, Hotel Severin, Indianapolis, March 14-16.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, annual meeting, Oklahoma City, Okla., March 22-24.

April.

AMERICAN CHEMICAL SOCIETY, Baltimore, Md., April 3-7.

NATIONAL PETROLEUM ASSOCIATION, semi-annual meeting, Hotel Cleveland, Cleveland, Ohio, April 13-14.

OIL-WORLD EXPOSITION, Houston, Tex., April 24-29.

May.

PETROLEUM ELECTRIC SUPPLY ASSOCIATION, Houston, Tex., May 2-4.

PETROLEUM INDUSTRY ELECTRICAL ASSOCIATION, Rice Hotel, Houston, Tex., May 2-4.

NATURAL GASOLINE ASSOCIATION OF AMERICA, Hotel Tulsa, Tulsa, Okla., May 3-4-5.

INTERNATIONAL

Atlantic Refining Co. Plans Exploratory Operations in Cuba

Atlantic Refining Co. subsidiary in Cuba is preparing to start one or more deep exploratory tests under the revised mineral law which calls for drilling to at least 4,000 feet. Details are being worked out in the southwest and it is probable the work will be entrusted to a Texas contractor. Movement of heavy drilling equipment into Cuba will mark the first serious search for production in that country. Exploration up to the present has been confined to shallow tests drilled with machines.

Basrah Petroleum Co. Iraq Concession Approved by King

The Iraq Government's oil concession to the Basrah Petroleum Co. has been passed by the Iraq senate and approved by King Ghazi, it was announced last week.

The Basrah Petroleum Co. recently was formed by British interests with a capital of $5,000,000. Its stockholders also include French interests and the Near East Development Corp., representing Socony Vacuum and Standard of New Jersey interests. The convention, signed July 29, gave the company exclusive rights for 79 years to search and extract oil from Southern Iraq where there is no conflict with rights granted to other companies.

The Basrah company must start drilling within three years and export oil within seven and one-half years, paying Iraq an annual rent of £200,000 until it starts exporting. Then it must pay a royalty of four shillings per ton of oil produced subject to a minimum of £200,000. Iraq also is to receive free 20 per cent of all oil produced and not exported.

Czechoslovak Output Is Not Affected by Changes in Map

Czechoslovak petroleum production in September totaled 1,597 metric tons, which represents a negligible decline of 0.7 per cent as against 1,609 metric tons in August, 1938, but is a substantial increase of 13.1 per cent compared with 1,412 metric tons extracted in September of the previous year.

Production of natural gas in September amounted to 134,408 cubic meters, representing a loss of 3.6 per cent compared with 139,465 cubic meters in August, 1938, but it was 13.2 per cent above that of 118,691 cubic meters for September, 1937.

Cumulative figures for the period from January through September, 1938, aggregated 14,298 metric tons of crude petroleum, or a gain of 10.4 per cent as against 12,949 metric tons during the corresponding period of the preceding year. Output of natural gas increased by 16.9 per cent from 1,052,397 cubic meters during the first nine months of 1937, to 1,230,753 cubic meters during the same period of 1938.

The recent reduction in Czechoslovak territory resulting from the occupation of large frontier areas by Germany did not affect the Czechoslovak petroleum production as all the oil wells are located in the present Czechoslovak territory.

Hopes for Increasing Production in Poland Center in Southeast

Polish production of crude during August, amounted to 43,287 metric tons and the price was higher than in July. The price for 10-ton tank of the "Boryslaw" brand was 1,570 zlotys (zloty equals about $0.19). Natural gas production during August amounted to 44,596,000 cubic meters and the price remained unchanged (0.0421 zlotys per cubic meter). There were 852 active petroleum and natural gas mines in August employing 10,887 workmen, and 32 new shafts were opened during the month.

There were 55 refineries and gasoline plants (manufacturing gasoline from natural gas) employing jointly 3,778 workmen. A total of 42,920 tons of crude was manufactured into 42,631 tons of various derivatives while output of liquefied petroleum gases amounted to 177 tons. The amount of 23,410,000 cubic meters of gas was converted into 3,590 tons of gasoline. The domestic consumption of petroleum products amounted to 37,138 tons and exports to 3,356 tons.

The low domestic output of crude and the dangers involved in a shortage of domestic supplies are receiving serious attention. No important new discoveries have been made so far in spite of the special investigations of the State Geological Institute. There appeared in the August issue of an official periodical devoted to the petroleum industry (Kopalnictwo Naftowe w Polsce) an article to the effect that in the long petroliferous sub-Carpathian region between Chyrow and Parekinsk (some 120 kilometers) no important new drillings were effected during the last 20 years. The petroliferous belt probably extends even further to Truskawiec (total length of 200 kilometers) and efforts should be made to sink new wells there. In the drilling undertaken during the last 20 years there was lacking either proper professional approach, or consistency of efforts, or else means for overcoming technical difficulties. The article raises hopes as to the possibility of increasing petroleum production in the southeastern section of Poland if a serious effort is made.

Shale Oil Production Being Stimulated For British Defense

According to the trade press, as a result of the report of the Committee of Imperial Defense, the desirability of encouraging domestic production of shale oil and the consequent guarantee of the government of an increase in the preference on domestic products, Scottish Oils, Limited, have decided to extend production of crude oil from the Scottish shalefields in the West Lothian area. It is stated that some of the Philipstoun mines will be reopened, new crude oil works erected near the Westwood pit, and the West Calder shale deposits developed, and as a result the throughput at the Niddry Castle oil works will be increased, as well as the output of other crude oil plants. Scottish Oils, Limited, and the D'Arcy Exploration Co., which is continuing its search for oil at Milton of Balgonie in Fifeshire, are both subsidiaries of the Anglo-Iranian Co.

Dutch West Indies September Exports Show Slight Gain

The Dutch West Indies, where two of the world's three largest refineries are located, exported crude oil and petroleum products in September at the daily average rate of 452,420 bbls. compared to 449,640 bbls. daily in August.

During the month shipments from Curacao where the Shell's subsidiary refinery is located totaled 7,372,603 bbls. Out of the total Curacao shipments 4,125,022 bbls. were fuel oil, a slight decline from 4,191,854 dispatched to world markets in August. The most outstanding increase was in the exportation of lubricating oil which totaled 744,600 bbls. for the month compared to 128,777 bbls. in August.

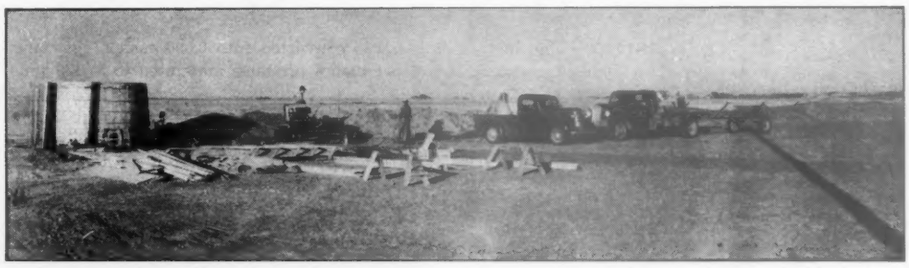
Shipments from Aruba, the island on which Standard Oil Co. of New Jersey's subsidiary has its large refinery, totaled 6,199,995 bbls. for September compared to 7,294,362 bbls. in the preceding month. Here, too, more than 50 per cent of the month's shipments consisted of fuel oil totaling 3,505,295 bbls. for the month which was more than a million barrels less than the aggregate of 4,571,888 bbls. exported in August.

Exports from the two islands for the three months comprising the third quarter of 1938 are shown below by products:

DUTCH WEST INDIES EXPORTS
(In barrels of 42 gallons)

Products—	July	August	September
Curacao			
Kerosene	105,995	41,643	121,861
Fuel oil	3,992,367	4,191,854	4,125,022
Gasoline	1,229,606	858,677	1,087,161
Gas oil	436,649	138,849	382,104
Diesel oil	295,931	406,854	289,058
Lube oil	71,008	128,777	744,600
Crude oil	729,344	877,835	622,797
Totals	6,860,900	6,644,489	7,372,603
Aruba			
Kerosene	410,161	389,446	329,327
Fuel oil	3,445,482	4,571,888	3,505,295
Gasoline	1,476,477	1,474,208	1,158,156
Gas oil	469,937	255,221	567,935
Diesel oil	388,236	554,442	565,796
Crude oil	48,864	49,157	73,486
Totals	6,239,157	7,294,362	6,199,995

Pipe Line Activity



Bell Oil & Gas Co.'s loading terminal under construction 6 miles west of Burkburnett, Tex. A 4-inch, 10-mile, all-welded line has been laid from the company's refinery at Grandfield, Okla., and will be used to transport gasoline to this point. The terminal will consist of ten 10,000-gallon storage tanks and two 20,000-gallon tanks and necessary loading facilities. Loading pumps will be electric motor driven, capable of loading four 1,000-gallon trucks in five minutes. Construction of the terminal is expected to be completed about the middle of this month.

Manly Oil Corp. Line Extended in Centralia

Manly Oil Corp.'s 13-mile line from the Lake Centralia-Salem field to Centralia is now in operation. The 4-inch line will service the Big Basin Refinery and will also transport oil to loading racks. The line extends from the Young School lease in Section 20-2n-2e into Centralia and is being extended to the Young Church lease. Its capacity is 8,000 bbls. daily. P. H. Hertzog, co-owner, said the company had contracted to take 2,000 bbls. daily from its first customer. When all gathering lines and connections are completed the line will extend approximately 20 miles.

Operation of the line is expected to relieve a congestion of oil in the field, accumulated since Sohio Corp. and other purchasers limited their purchases to 50 bbls. a well daily.

Texas-Empire Lays Section In Butler County, Kansas

Texas-Empire Pipe Line Co. has started construction on 7 miles of new oil pipe line in western Butler County, Kansas, replacing a section of a 12-inch crude oil line extending from Oil Hill to Valley Center. The contract is handled by Truman & Smith Construction Co. of Eldorado.

Five miles will be 10-inch and 2 miles 12-inch It extends from about 2 miles north of Trotter's Station 16 miles west of Eldorado. The old section will be salvaged.

Commission Considering Supply for Gas Line

AUSTIN, Tex. — The Railroad Commission has granted Forest E. Gilmore permission to conduct a reserve determination on gas wells on the wells of H. E. Talbot on the M. O. Kennedy lease in Stephens County to ascertain if it is sufficient to justify construction of an 8-mile pipe line to a market.

Objection Withdrawn to Gas Line Into Minnesota

WASHINGTON, D. C.—The Northern Natural Gas Co. has withdrawn its objection to construction by Kansas Pipe Line & Gas Co. of a $21,470,000 gas line from Kansas into Nebraska, the Dakotas and Minnesota.

American-Michigan Seeks Permit for Clare Line

SAGINAW, Mich. — The Michigan Public Utilities Commission has set December 16 for a hearing on the petition of the American-Michigan Pipe Line Co. of Muskegon for permission to construct natural gas transmission lines and a gathering system in three Clare County townships at a cost of $219,000. The petition substitutes one filed earlier by Mecosta Pipe Line Co., owned by Taggart Brothers of Big Rapids. The new system proposes to take gas from Freeman, Redding and Lincoln townships, Clare County.

Representatives of the Mecosta company told the commission they had allocated 2,000,000,000 feet of another reserve in the Austin field to Big Rapids at the rate of 2,000,000 feet annually, but that increasing consumption in that community was depleting the supply faster than intended. They informed the commission they had contracted with American-Michigan for purchase of sufficient gas to supply the Big Rapids increase, the gas being taken by American Production Co. of Grand Rapids from wells in the same three townships. The Mecosta company asked that American-Michigan be named the common purchaser in the Clare field and that the Mecosta petition be withdrawn.

In its application American-Michigan asserted the Clare field would supply at least 5,000,000,000 feet of gas for Big Rapids and Muskegon.

Contract Let by Cosden For Ramsey Pool Line

Work was to begin this week on laying of a 4-inch, 21-mile welded pipe line from the Ramsey pool in Payne County, Oklahoma, to Cushing, J. A. Beyhan, superintendent of Cosden Pipe Line Co., announced Monday following letting of the contract to Williams Brothers, pipe line contractors of Tulsa.

It will connect at Cushing with the Cosden company main Cushing-Drumright system serving the Mid-Continent Petroleum Corp. refinery at Tulsa. The line will include one river crossing, a 6-inch line across the Cimarron River near Ripley. It is scheduled for completion by January 1, when the Cosden company will begin transporting all allowable production in the Ramsey field, now being taken by Oklahoma Pipe Line Co.

The project, representing an investment of approximately $100,000, will include construction of a pump station in the field. Two 5,000-bbl. welded tanks will be erected. Gaso-Waukesha engines and Gaso pump units will be installed.

This is the first line of any consequence to be started by the Cosden company in Oklahoma in the last two years, the contract being let just two years after work was started on the Fitts field line.

Natural Gasoline

First Unit of Portex Plant Is Completed

JOAQUIN, Tex.—The first unit of the gas repressuring plant of the Portex Oil Co. in the Joaquin field of Shelby County has just been completed. The company plans to start the construction of 19 additional units which will give a total capacity of 400,000,000 feet of gas daily. The first unit has a capacity of 20,000,000 feet daily. This gas will be repressured into the horizon whence it came after it has been processed.

Natural Gasoline Production in California Reported for October

California natural gasoline production totaled 56,460,178 gallons in the month of October according to the San Francisco office of the Bureau of Mines. The quantity of gas treated and the gasoline produced as reported by fields appear below:

Field—	Gas treated (thous. cu. ft)	Natural gasoline produced (gallons)
San Joaquin Valley:		
Belridge	2,604,755	1,861,118
Elk Hills	57,010	121,151
Kettleman Hills	11,037,240	16,118,899
Midway-Sunset	1,039,304	2,176,753
Mountain View	313,980	373,697
Miscellaneous	1,236,981	754,599
Coastal district:		
Elwood	520,943	752,860
Rincon	160,365	212,561
Santa Maria	131,649	386,229
Ventura Avenue	3,368,427	5,000,831
Miscellaneous	493,902	486,264
Los Angeles basin:		
Brea-Olinda Coyote	485,123	1,288,565
Dominguez	1,693,078	3,144,125
El Segundo	169,755	359,081
Huntington Beach	1,133,397	3,537,112
Inglewood	266,646	389,418
Long Beach	2,371,172	8,114,687
Montebello	545,357	772,104
Richfield	290,431	534,858
Rosecrans	717,376	995,361
Santa Fe Springs	1,758,678	5,196,626
Seal Beach	416,277	555,840
Torrance	558,372	846,923
Miscellaneous	1,196,654	2,480,513
Total (all fields)	32,566,872	56,460,178

Distribution

	(Gallons)	(Gallons)
Stocks, beginning of month	1,945,221	
Production during month	56,460,178	
Delivered to refineries		55,562,254
Delivered to jobbers, brokers and blenders		614,619
Blended at plants for production of motor fuel		11,385
Losses		59,028
Stocks at end of month		2,158,113
Total	58,405,399	58,405,399

Liquefied petroleum gas production ..... 2,520,007 gals. = 60,000 bbls.
Motor fuel produced ..... 12,971 gals. = 309 bbls.

Kansas Hearing Postponed In Hope of Agreement

The southeastern Kansas stripper well hearing scheduled for December 6 at Independence has been postponed indefinitely, according to E. G. Dahlgren, conservation director for the Kansas Corporation Commission. Stripper well operators protesting proposed withdrawal as a purchaser in the area of Sinclair Prairie Oil Marketing Co. joined with company officials in seeking further postponement to allow more time to work out an agreement.

Although neither producers nor buyers had announced results of private conferences, it was unofficially reported the operators were considering a proposal to purchase the Sinclair Prairie gathering lines, with payment to be made from oil sold during a four-year period.

Refinery Expansion

E. L. Smith Oil Co. Combines With Lion Oil Refining Co.

Consolidation of the Lion Oil Refining Co. and E. L. Smith Oil Co., incorporated in Delaware, has been made effective. In the stock exchange, the Lion Oil Refining Co. will issue one share of common for each 10 shares of Smith stock outstanding. The E. L. Smith Oil Co. had authorized capital of $10,000,000 represented by 1,000,000 shares of $10 par value stock. The Lion Oil Refining Co. has authorized capital of 1,000,000 shares of no par common.

The purpose of the merger is to reduce accounting expenses and taxes. The Lion directors will continue as directors of the merged companies.

Zane Refining Co. to Build Oil Refinery

ZANESVILLE, Ohio.—Plans are in progress for construction of a 1,500-bbl. crude oil refinery here by producers to refine Buckeye crude, according to an announcement by Philip N. Faine, secretary of the Ohio Pennsylvania Grade Oil Producers Association, who said the decision to build the plant was brought by several cuts in the price of crude since January last.

The new plant here will cost approximately $500,000. It will be built on a 40-acre site along the Muskingum River and operated by a new company, the Zane Refining Co., principals of which will be members of the Ohio Penn Grade Oil Producers Association.

Burford Closes East Texas Plant

GLADEWATER, Tex.—East Texas Refining Co.'s plant at Longview has been closed.

J. J. Thomas, superintendent, issued a statement that the plant was being temporarily closed because of "demoralizing refinery prices, particularly in gasoline." He expressed no opinion as to when the plant would reopen.

The plant, with cracking and skimming units, has a daily capacity of 10,000 bbls. but has been running at a reduced rate for some time.

East Texas Refining Co. has headquarters in Dallas. Freeman W. Burford is president.

Mankins Refinery Will Commence Operations

WICHITA FALLS, Tex.—Mankins Oil & Refining Co.'s new plant at Mankins, Archer County, will make its initial crude run this week.

The plant, owned by the Cargo Oil Corp., New York, has a capacity of 1,500 bbls. daily but will operate at first on 1,000 bbls. daily. Oil will be obtained from the Ferguson area 6 miles north at K.M.A. and transported to the plant through a 4-inch line. Gasoline, kerosene, naphtha and Diesel fuel will be processed.

Crude Runs Raised at Cosden Plant to Handle New Wells

FORT WORTH, Tex.—Cosden Petroleum Co. late last week stepped up daily runs at Big Spring, Tex., refinery by about 3,000 bbls. daily following the company's taking over of additional pipe line connections in the Howard-Glasscock field. The company acquired the output of 90 wells, having an allowable of 3,027 bbls. daily, formerly connected to Humble Oil & Refining Co.'s system. Humble turned over its gathering system in Howard-Glasscock to Cosden, who will lay a 2-mile, 4-inch line to connect the new wells to its main line running to Big Spring.

Capacity of Cosden's plant was enlarged to around 15,000 bbls. daily last summer through installation of new equipment, but daily runs were held to around 9,500 bbls. daily due to lack of crude caused by the two-day shutdowns. Thus acquisition of the new well connections will enable runs to be boosted to 12,500 bbls.

Ark-La-Tex Division of Western Petroleum Refiners to Meet

The regular monthly meeting of the technical group of the Ark-La-Tex Division of Western Petroleum Refiners Association will be held on Friday, December 9, 1938, in the Blue Room of the Kilgore Hotel, Kilgore, Tex., beginning at 4 o'clock p.m.

The special feature of this meeting will be a paper entitled, "Manufacture and Application of Fire Brick and Refractory Specialties in the Southwest," by Howard Hicks, of the Thermo Fire Brick Co., Sulphur Springs, Tex. In presenting this subject, which is of vital interest and importance to all refiners, Mr. Hicks will deal with practices more or less common among refiners in the Southwest and will present many informative facts concerning manufacturing processes, specialty development, and the general application of refractories now manufactured and distributed in southwestern territory. At the conclusion of the reading of this paper there will be an open forum discussion which will give the refiners assembled an opportunity to present such questions as they may have in mind.

For the past 15 years Mr. Hicks has been in the fire brick manufacturing business, and has participated in the development of improved manufacturing standards.

Refiners throughout this area, whether members of the Western Petroleum Refiners Association or not, are invited to attend the meeting in Kilgore next Friday.

Natural Gas News

Lawrenceville Field Has 21,600,000-Foot Well

LAWRENCEVILLE, Ill.—A new gas production record was reported by Joe Kesl, Jr., of Edwardsville, Ill., who said Scott Gray No. 2 had flowed 21,600,000 feet in its initial 24-hour test. It increased gas production of the Lawrence County field to approximately 140,000,000 feet daily.

Texas Gas Allowables Reduced for December

AUSTIN, Tex.—Reduced gas allowables for the Panhandle and Rodessa field during December were announced by the Railroad Commission in conformity to lowered nominations by purchasers.

Contrary to the seasonal trend, purchasers filed nominations for 113,659,000 feet daily of sweet gas from the East Panhandle field compared to 133,560,000 feet daily in November and the allowable was set accordingly. The sour gas allowable for the West Panhandle field was reduced to 645,899,000 feet daily in December from 648,192,000 feet in November.

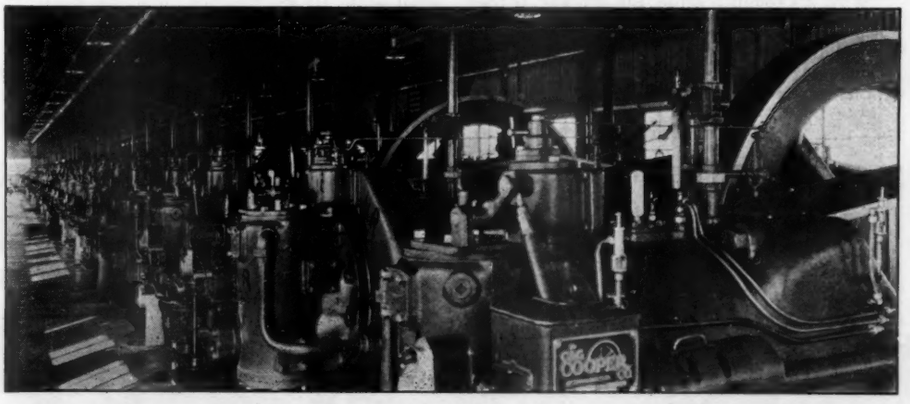
The daily allowable for sweet gas in the Rodessa field was set at 55,735,000 feet compared to 58,918,000 feet in November. Allowables by monthly totals for the three sands in the field were: December and November, respectively, Dees-Young, 703,917,000 and 732,690,000 feet; Gloyd, 654,317,000 and 824,910,000, and Hill, 369,551,000 and 209,940,000 feet.

Pennsylvania Rate Hearings To Open at Pittsburgh

HARRISBURG, Pa.—Additional hearings in the Public Utilities Commission inquiry into natural gas rates were fixed for December 9 at Pittsburgh.

The Columbia and Peoples Natural Gas companies were instructed to defend their rate structures at that time. On the same day the commission will hear the complaint of the McKee Glass Co. against the Peoples rates, asking rebates of "overcharges" from 1931 to 1938.

Unusual Construction Features Lone Star Gas Co. Booster Unit



Line of compressors in Lone Star Gas Co.'s new booster station at Shamrock, Tex.

The Lone Star Gas Co. taking gas from Wheeler County, Texas, through an 18-inch line running to Petrolia, Tex., a distance of 196 miles, has found it necessary to install a booster station situated at Shamrock, Tex. This station is entirely a new design for this company, having entirely enclosed water system using a force draft cooling tower with all water lines above the ground. The water manifold lines are situated in the engine room. The intake and discharge manifolds are also situated above the ground resting on concrete supports. This eliminates corrosion as well as being a safer practice in case a leak appears. The gas fuel lines are buried beneath the floor of the engine room, but each line is vented with a larger pipe so in case a leak occurs it will be vented out into the open and not accumulate under the floor.

This line is one of the important lines of the Lone Star system as it serves a great portion of northern Texas cities and is boosting up to 50,000,000 feet daily. This station has fifteen 165-horsepower engines giving a total of 2,475 horsepower. All buildings are fireproof structures with asbestos sheet siding.

THOMPSON

(Continued from Page 25)

game with no authority to enforce his decisions would be about as useful as a federal oil umpire. The states, being sovereign, wouldn't take orders from him. And you know being a federal officer doesn't impart any new and superlative quality to a man. After all, he's just a fellow from Georgia or Vermont with a federal badge on.

"No, I tell you federal domination is the last thing we need. How would you like to have to go to Washington every time you wanted to drill a well? Do we want the kind of regimentation they have in Germany, where a man is almost afraid to blow his nose without a permit? We want a government, not by fear, but by common consent."

"Get me right about this," came like an afterthought. "We don't want too much centralization of power anywhere. Even the state Railroad Commission has too much. We received wide authority at first because we were feeling our way. We have gained so much exact knowledge about oil production that it would be far better now to have some of the regulations administered by the commission placed in the statute law. That would be putting the power back into the hands of the people, for the legislatures are nearer the people than the commission is. I told the Cole committee that. I refer to regulations that have become established formulas. Their application might well be taken out of the commission's hands. Men clothed with a little brief authority are likely to get cocky. There is more danger too of administering the rules under the influence of sympathy or prejudice than there would be if the prescribed course of action were incorporated in the statutes. We are evolving principles that are becoming accepted by the industry and they should be indoctrinated in the law."

Colonel Thompson refuses to get panicky over clashing interests and disquieting conditions in the oil industry. In fact, one suspects he would be restless and fretful if all the industry's problems were settled.

"We grow by each fighting for himself," he commented. "People, and states, must have something to fuss about or they stagnate. It's one of the joys of democracy. I don't chafe over the failure of some states to pass good oil laws. Eventually they will do it without being forced, for they will see the wisdom of it. They will see too that they themselves will have to pay the penalty of uneconomic practices."

"How can you be sure of that?"

"Why, it's common sense. But anyway, if they won't do it, let 'em preserve their freedom of action and go to hell in their own way."

The ride was at its end. Here spread Austin, with its stately government buildings and its magnificent statehouse built of Texas granite—the colonel makes it a point to tell you that.

"This has been fun," gleamed Colonel Thompson. "Good-by."

As he strode into the rotunda of the capitol one noted that he had a friendly nod and word for the humblest employe. Rise to national prominence does not seem to have necessitated any change in the size of his hat.

He has done a lot of living in his 45 years, this locomotive in pants, as one admirer described him. He has more ideas in a minute than the average man has in a week, according to those who know him best. Take a look at his chart. At 9 a clerk his father's drug store in Amarillo. But what opportunity for self-expression and enterprise is there in a drug store? He started selling newspapers in the street and in almost no time he was operating a news agency, with three carriers. He sold the agency for $150, but the new owner lacked red hair, or whatever it requires to make a news agency successful, so young Thompson bought it back and added a magazine stand. With $900 he cleared from this operation he bought a candy store, put a clerk in charge while he attended school, and in a few months sold it at a profit of $150. The next venture was a drug store, which he bought for $3,000 and sold three months later for $4,000.

Changing Scene

At 16 he viewed a changing scene and fresh opportunity. Big cattle domains were being broken up and sold as farms. Home-seekers were swarming into the Amarillo area. They wanted to see the country. The boy showed it to them, buying a seven-passenger automobile for the purpose. The business netted him $200 a month while he continued to keep up his school work. It developed into an automobile and garage enterprise. When Ernest finished high school he owned an establishment employing three mechanics and a salesman.

Military training always had fascinated him, and he headed for the Virginia Military Institute. An epidemic closed it a few months later and the young Texan moved to Eastman Business College, Poughkeepsie, N. Y., completed the course and returned to Amarillo. Next a general automobile agency in Indianapolis, Ind., with five states as his territory. At 20 he gave that up to enter the University of Texas in Austin. He served as steward for his chapter of the Phi Kappa Psi fraternity. Then he became private secretary to Chief Justice R. R. Gaines and managed Mrs. Gaines' large personal estate. He accompanied the Gaines family on European trips, all the time keeping up his law studies. He was president of his senior law class.

The war. Young Thompson was with the Gaines family in Vienna when it started. He moved, with his companions, over to France, where the sight of marching men, troop trains, and tented camps quickened his martial spirit. When the United States entered the conflict the law student's class was two months short of graduation. He received his degree later in a training camp. First commissioned a captain, then a major, he took the machine gun battalion of the Nineteenth division to France and was stationed in the Argonne Forest. For valiant service he was promoted at 26 to lieutenant colonel in the field, the youngest man to receive that rank in the A. E. F.

Colonel Thompson was placed in charge of all machine guns in the Ninetieth Division, commanding 3,750 men and 105 officers. He is credited with directing the greatest machine-gun barrage ever laid down by any army when his men discharged 1,600,000 rounds of ammunition in one day. The machine gun tactics he developed in the Argonne are taught now as regulation service. He was with the Army of Occupation on the Rhine and returned to the United States in command of the 142nd Ohio Infantry Regiment. Then he settled down to law practice in Amarillo, continuing it till 1932 and gaining practical training which was to be of immense help later when thorny legal questions confronted the Interstate Compact Commission and the Texas Railroad Commission. Elected mayor by 75 per cent of the votes over four opponents, he entered upon a series of campaigns which reduced electricity, gas, water, and telephone rates besides cutting the city's tax rate from $1.35 to $1 per $100 valuation.

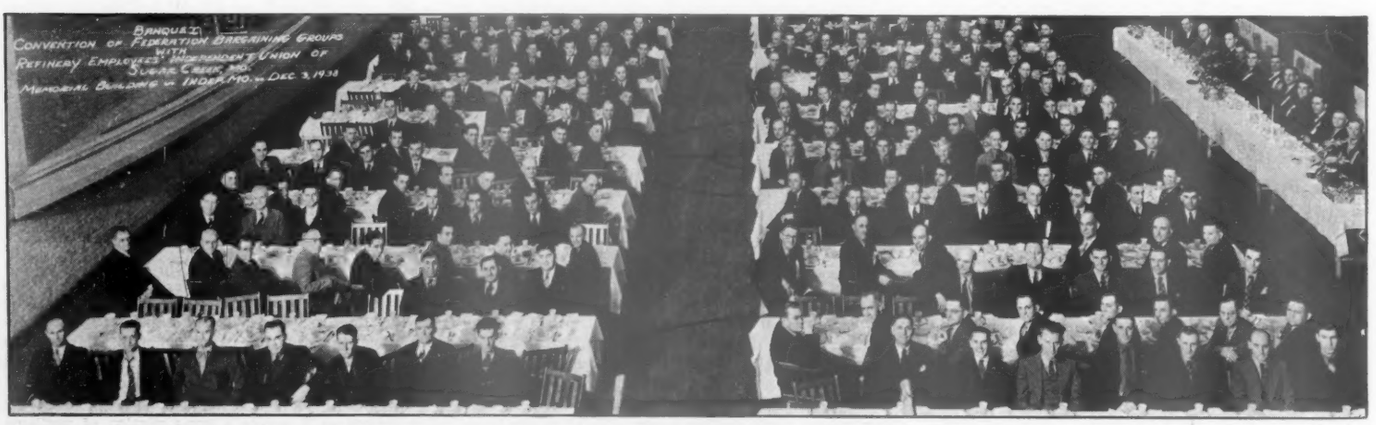
Colonel Thompson married May Peterson, Metropolitan Opera and concert singer. Mrs. Thompson is a member of the Methodist Church. The colonel is a member of the Central Presbyterian Church of Amarillo. He is a Mason, a Shriner, and commander of the 111th Quartermaster Regiment, Texas National Guard. His interests in civic and philanthropic work are wide.

When W. Lee O'Daniel defeated Colonel Thompson for governor of Texas last summer the latter accepted the verdict without rancor, and he has no acrimonious word for the flour salesman who by a strange political upset is to be the chief executive of a great state.

In fact, on thinking over that ride from San Antonio to Austin it is recalled that not one disparaging word was spoken of any man.

Systems? Oh, yes. Colonel Thompson can vivisect an economic system nerve by nerve with a verbal scalpel keen and relentless, and seem to enjoy it. But with individuals involved in the system he is amazingly patient.

One thing more. His motto is: "The value of a great man is that he increases the value of all men."


BANQUET
CONVENTION OF FEDERATION BARGAINING GROUPS
WITH
REFINERY EMPLOYEES' INDEPENDENT UNION OF
SUGAR CREEK, MO.
MEMORIAL BUILDING IN INDEP. MO. ON DEC. 3, 1938

Representatives of employes of Standard Oil Co. (Indiana) at a meeting held December 3 at Independence, Mo., voted to form the Federation of Standard Oil Co. employes and to reject the proposed retirement annuity plan which will come up for consideration and vote at a special meeting of stockholders on December 22. Hugh Lowery, Alton, Ill., presided and Morris Mason of Wood River, Ill., was acting secretary at the meeting attended by 98 delegates representing, it was said, 84.4 per cent of the 14,133 employes. A committee was appointed to accept proxies to meet with the stockholders on December 22.

N. V. Curacaosche Petroleum Industrie Maatschappij (Shell) refinery, adjoining harbor at Willemstad, Curacao

Two of World's Largest Refineries

By C. O. WILLSON

ARUBA and CURACAO ISLANDS, N.W.I., Dec. 5.—These two small islands off the coast of Venezuela in the Caribbean Sea are the homes of two of the world's largest refineries. The in-shipments of crude oil to their harbors and the outgoing movement of refined products to world markets total close to a million barrels daily. Together they account for approximately one-third of all the crude refined outside the United States and they furnish more countries their petroleum supplies than any other refining area.

The Aruba plant at San Nicholas is owned by the Lago Oil & Transport Co., Ltd., and refines approximately 225,000 bbls. daily with a peak close to 300,000 bbls. for a 24-hour period. It is easily the world's largest refinery in crude throughput. The Curacao refinery, operated by N.V. Curacaosche Petroleum Industrie Maatschappij near Willemstad, refines about 175,000 bbls. daily. No refinery in the United States approaches either of these plants in crude run to stills and their only competitor in size is the Abadan, Iran, refinery of the Anglo-Iranian Oil Co., Ltd.

The Lago company is a Canadian concern and is a wholly owned subsidiary of the Standard Oil Co. of New Jersey and operates with crude obtained from that company's producing subsidiaries in Venezuela and Colombia. The C.P.I.M. company is a subsidiary of the Bataafsche Petroleum Maatschappij, the principal operating company of the Royal Dutch-Shell, and secures practically all of its crude supplies from that combine's producing organizations in Venezuela. A 20,000-bbl. topping plant, near Orangestad, Aruba, of the Arend Petroleum Co. (Canadian Eagle) is temporarily shut down.

A word about these islands and how you get to them. Curacao has an area of 210 square miles, and 40 miles north and west is Aruba with an area of 69 square miles. Curacao's population is 70,000 and that of Aruba 23,000. Both have interesting histories dating back to their discovery by the Spanish in the fifteenth century. Neither had any commercial prominence until the Shell refinery was built, starting in 1917, and the Lago company broke ground on its refinery in 1928.

Now both islands are important points with more than 10,000 steam and Diesel-powered vessels visiting the two islands last year. The Royal Netherlands Steamship Co. and the Grace line maintain regular passenger and cargo service to the two islands from New York, and passenger and freight boats from other parts of the world are often seen in the two principal ports.

The writer flew the 160 miles from Maracaibo, Venezuela, to Aruba on the K.L.M. (Dutch) line in one hour, and then on to Curacao in another 35 minutes. There is air service twice daily between the two islands, and to mainland at Barranquilla, and three points in Venezuela, three to five times weekly. These connect with Pan American Airways system on the mainland so it is possible to reach here from Miami, Fla., in one and one-half days. The islands are 1,800 miles south of New York and steamers make the one-way trip in 5 to 10 days.

The trip back to Maracaibo from Aruba was made in one of the 75 tankers which are engaged in bringing crude from Venezuela to these two refineries. These tankers are of special shallow-draft, flat-bottom design in order to pass through the shallow bar of the strait that separates the Venezuela Gulf and Lake Maracaibo where most of the crude is obtained. The average load of the tankers is around 20,000 bbls. each, 12 feet 6 inches draft being the maximum load that can be transported through the bar.

The tankers move in and out of the bar twice daily, taking advantage of the high tides. The distances from the lake terminals to Aruba and Curacao range from 185 to 250 miles and a round trip is usually made in two and one-half to three days. The writer left Aruba at 6 a.m. and the tanker arrived off the outer bar of the lake in the evening when the outgoing fleet was coming through. As occasionally happens, one of the outgoing tankers grounded in the crooked and narrow bar and it was necessary to stay outside the bar until the following morning. This brought additional incoming and outgoing tankers into the area and as the outgoing fleet resumed movement in the morning a total of 24 tankers was visible from one point. A view of this fleet of tankers aids in visualizing the size of the producing, transportation and refining operations in this part of the oil world.

These fleets are engaged solely in the transportation of crude oil. In addition there is a steady movement of refined products from the refineries in larger tankers to all parts of the globe.

The following tables summarize the import and export shipments from Aruba and Curacao for the second quarter of 1938 based on preliminary customs data:

PETROLEUM IMPORTS—ARUBA AND CURACAO
SECOND QUARTER, 1938

(Data in barrels)

Products—	Aruba	Curacao	Total
Gas oil	260,006	1,378,039	1,638,045
Gasoline	365,929	1,074,550	1,440,479
Kerosene	373,211	164,399	537,610
Crude oil	21,288,953	17,471,324	38,760,277
Fuel oil	454,960	720,208	1,175,168
Lubricating oil	755	2,278	3,033
Total	22,743,814	20,810,798	43,554,612

PETROLEUM EXPORTS—ARUBA AND CURACAO
SECOND QUARTER, 1938

(Data in barrels)

Crude oil	330,582	1,819,946	2,150,528
Fuel oil	13,005,805	12,205,502	25,211,307
Gas oil	959,935	1,274,507	2,234,442
Diesel oil	2,507,211	732,718	3,239,929
Gasoline	4,796,194	4,094,033	8,890,227
Lubricating oil	440,226	339,510	779,736
Kerosene	758,440	155,794	914,234
Total	22,798,393	20,622,010	43,420,403

Except for the crude oil, most of the products imported by the two refining organizations come from the United States. The plants for several

Arend Petroleum Co. (Canadian Eagle) refinery near Orangestad, Aruba

Lago Oil & Transport Co., Ltd. (Standard of New Jersey) refinery at San Nicholas, Aruba

years have been important buyers of natural gasoline produced in the United States. In some cases the products imported are blended with plant products before final sale.

The customs data show that products from these plants in the course of three months go to more than 50 countries. European countries, particularly Great Britain, and South America absorb the bulk of the products from the two refineries.

The principal buyers of products for the second quarter (April, May and June) were as follows (data in barrels):

Fuel oil: United States, 6,377,942; England, 4,084,842; Argentina, 2,165,399; Italy, 1,413,823; Germany, 2,023,880; Netherlands, 975,901.

Gas oil: England, 882,147; Netherlands, 306,003; Sweden, 134,600; Germany, 323,886; Portugal, 73,875.

Kerosene: Netherlands 250,801; Brazil, 73,478; Baltic states, 35,692; Germany, 24,136; Portugal, 19,876.

Gasoline: England, 5,083,329; Netherlands, 730,347; Germany, 565,463; Portugal, 426,949; Brazil, 309,071; Belgium, 208,534; Belgian Congo, 183,524; Sweden, 226,354.

Lubricating oils: Netherlands, 151,728; England, 100,076; Germany, 81,681; Venezuela, 3,529. Some of these lubricating oils are unfinished stocks.

These and other data show how large a part of their petroleum products Great Britain and some of the European countries obtain from these islands. This is particularly true of the heavy oils.

Heavy Oil Plants

These two refineries are heavy oil plants. Based on these reports the average yield from crude at the two plants, despite large cracking equipment, is approximately only 20 per cent, with a 60 per cent yield of residual fuel. The remaining products are distillates and gas oils and small quantities of lubricating stocks. Particular attention is paid to the production of Diesel fuels at both plants due to the steadily increasing demand for these oils.

The explanation of the relatively low gasoline yields, of course, lies in the low-gravity crudes with which both plants operate. At this time, for example, the Lago refinery is operating with 25,000 bbls. daily of 25° A.P.I. Colombia crude; 60,000 bbls. daily of 18° Quiriquire, Venezuela, crude; 40,000 bbls. daily of 23°-24° La Rosa crude; 80,000 bbls. daily of 17° Lagunillas crude and 20,000 bbls. daily of 14° to 16° gravity Tia Juana crude. The last three fields are all in the Lake Maracaibo area. The Shell plant at Curacao operates with these lake crudes. It also has most of the crude from the fields which are connected to the lake by pipe line. Some of these crudes are as low as 12°, with no high-gravity crudes. With some of these crudes the object is not only to secure a small gasoline yield but also to reduce the viscosity of the heavy oils so they are suitable as fuel oil.

A brief description of some of the Aruba operations will indicate the refining problems in handling these crudes. The Colombian crude, which comes from the properties of the Tropical Oil Co., is topped of its gasoline, and 32° distillate suitable for Diesel fuel is also taken overhead. Part of the bottoms is suitable for lubricating oils.

The Quiriquire crude goes to combination units where the 3 per cent naphtha cut is topped by heat exchange. In the cracking operation the gasoline yield is increased to 15 per cent. A large yield of heavy Diesel fuel is secured. The 35 bottoms of this operation have an 800 viscosity.

The La Rosa higher gravity crude gives a yield of 15 per cent gasoline by natural distillation. This is increased to 25 per cent by cracking. This crude also gives a substantial kerosene cut. The company at present is installing an SO_2 (Edeleanu) unit to treat all kerosene cuts. Light and heavy Diesel fuels also are obtained from this operation.

The large charge of Lagunillas crude goes direct to the combination units and 6 per cent straightrun naphtha cut is taken. The topped crude then goes to the cracking coils. The overall yield is 22 per cent gasoline, 5 to 6 per cent gas oil, and the remainder fuel oil bottoms meeting bunker specifications. The Tia Juana crude has no straightrun gasoline but a yield of 18 per cent naphtha is secured in the cracking operation.

It is apparent that such an operation requires a large number of distillation units varying in size and design. The crude distillation consists of one 25,000-bbl. combination atmospheric and vacuum unit; one 16,000-bbl. straight atmospheric still and four atmospheric units of 8,000-bbl. capacity each.

The rerun operation for the treated cracked distillate consists of three 5,500-bbl. units; one 17,000-bbl. and one 10,000-bbl. making aviation gasoline.

Two pitch stills are under construction. These will operate with the heavy residue, taking overhead through vacuum distillation substantial yields of cracking stock. The bottoms will be suitable for asphalt manufacture.

The principal operation consists of eight 20,000-bbl. combination units originally built 10 years ago when the plant was first constructed. This is probably the largest battery of cracking stills in the oil business. Three 18,000-bbl. viscosity breaking units are also operated and a new 9,000-bbl. cracking coil for gas oil is under construction.

Most of the crudes are high in sulfur content and considerable emphasis is placed on treating. The bulk of this is carried on in large continuous acid treaters and doctor sweetening units.

The plant is now making test runs on a new hydrogenation unit which will increase the refinery's yields of aviation gasolines. This operation is tied in with the plant stabilization and polymerization operation. Gasoline is extracted from approximately 22,000,000 feet of wet gas daily. Methane and propane are removed from the pressure distillate in the stabilization operation. The butane and butylene go to the polymerization plant of the hot acid type. This operation, which has been used in other plants, is directly connected with the hydrogenation operation in the production of isooctane, utilized as blending material in the production of aviation gasolines. Hydrogen for this hydrogenation operation is obtained from the residue gas from the gasoline absorption plants. This operation, while it incorporates new designs in the application of equipment, follows the combination polymerization-hydrogenation operation which is used at a few refineries in the States in the production of iso-octane.

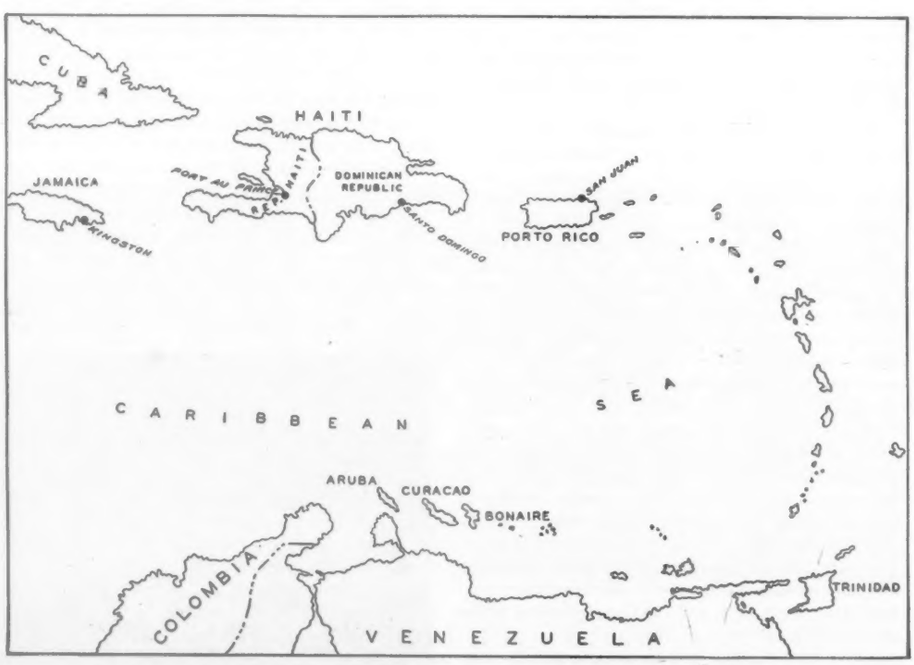
Under Construction

Some of the units just described are under construction but will be completed before the end of the year or early next year. The electric power plant at present has a capacity of 22,000 kw. and work is now under way which will double this capacity. All but 4,000 kw. are steam-condensing turbines. The 4,000 kw. will be obtained with two 2,000-kw. Diesel units under construction at this time. These will be largely used as standby capacity for the steam operation.

The Shell plant at Curacao follows the general design of Shell refineries. The Dubbs principles are followed in the design of cracking equipment with units of large capacity now in operation. The plant has polymerization units.

Due to the naphthenic base of the crude and the

(Continued on Page 36)



Location of Aruba and Curacao in relation to Venezuela

New Millions Borrowed to Meet Requirements of the Oil Industry

By H. Stanley Norman

NEW YORK, Dec. 5 — Major money markets of this country have been called upon for large-scale oil company financing or refinancing so far this year to the extent of $232,000,000. This total does not take into account the many more millions going to finance smaller operations, which have been distributed by bankers in the oil country in amounts usually ranging from $1,000,000 downward.

More than 30 per cent of the financing consummated by the major oil companies during the first nine months of 1938, or a total of $76,000,000, represents private sales of debentures and notes to banks and insurance companies. The public has been offered a total of $156,000,000 in debentures and serial notes due in the next 9 to 15 years. Even in the public offerings, however, part of the securities have been retained by the underwriting bankers and to that extent are representative of private sales.

Drain on Capital

The extent to which new financing has been practiced this year is indicative of several significant developments. In the first place the federal tax structure prompted some companies to make dividend disbursements beyond judgment of the managers who had been forewarned of the recession by slackened activity in the final quarter of last year. The unwise tax on undistributed profits was largely responsible for this.

In the second place, curtailment in production of crude limited the current return from wells, delaying payout and keeping money tied up in slow recoveries.

These drains on capital reduced the funds available for operations to maintain reserves and for replacing wornout or obsolescent equipment, necessitating going into the market for new money to carry on.

To keep abreast of technical developments in the refining of petroleum some of the leading companies have been compelled to make improvements and expansions to their processing equipment.

There have been hardly any exceptions to this general rule. Development of the more efficient combination units, the polymerization process, hydrogenation, solvent dewaxing, deresining and extraction, the latest in extraction of natural gasoline, are some of the better known technical refining advancements which have forced most of the companies to make extensive capital expenditures for refining equipment. Then too obsolescence is taking its customary toll of plant equipment along with replacements made compulsory by corrosion.

Competitive conditions are such in petroleum marketing that companies can ill afford to lag behind the field in the matter of keeping processing and equipment abreast of developments. Instances are of record when two to five years were required to regain a company's competitive niche once it permitted an adversary to steal a figurative march in the matter of refining technique. The public appreciation of improved petroleum products is growing more keen with the passage of time and it is now regarded as industrial suicide to produce a 1933 product for 1938 consumption.

The reason for the promptness with which technical refining developments must be met is naturally the progress in automobile engine design and construction. There is no reason to believe that the ultimate has been reached in internal combustion engine development and so long as this is true the refining branch of the industry must be equipped with the latest available in processing technique with an eye on the cost of converting crude oil into consumer products.

Certain readjustments in the producing branch of the industry as regards the financing of new development have developed during the past year which may have influenced borrowings of oil companies from public and private sources. Companies with their producing properties and prospects concentrated in Oklahoma and Texas have been particularly hard hit, although most of the other producing states have felt the pinch of reduced crude oil requirements. Approximately 58,000,000 bbls. less crude oil has been produced so far this year than at the same time in 1937.

Companies with properties concentrated in Oklahoma, Texas, Kansas, and New Mexico have probably contributed much more to curtailment of crude output than those in other sections. In some respects the production restrictions have resulted in demand for new financing on the part of companies who are accepting the long payout terms as an adjunct to acquisition of more producing properties. One company, Atlantic Refining Co., has been particularly active in the past two years in adding to owned crude oil reserves. Atlantic is one of the seven major companies applying to the public financial market for sale of securities during the recent months. Public acceptance of oil company securities may be indicated by the fact that the market for Atlantic's $25,000,000 debentures maturing September 1, 1953, moved above par on the first day the offering became available.

At the time Atlantic issued its debentures it was announced that proceeds would be used primarily for repayment of $16,200,000 of outstanding bank loans with the remaining $8,800,000 to be added to cash funds and used for capital expenditures. Atlantic capital expenditures during the 12 months ended June 30, 1938, aggregated $31,531,000 distributed as follows: Crude oil production, $14,663,000; refining, $3,706,000; marketing, $6,514,000; pipe lines, $3,251,000, and marine $3,397,000. The break-down discloses that Atlantic applied more than 46 per cent of its capital expenditures during the 12 months ended June 30, 1938, in the producing branch of the industry. The company's new refinery at Atreco on the Texas Gulf Coast was commissioned early this year probably accounting for the activity in acquiring new crude oil reserves in the Southwest and for the fact that capital expenditures have been particularly heavy in the producing department.

In keeping with its position in the oil industry, Standard Oil Co. (New Jersey) has obtained the largest amount of new financing in the entire field. In June, Standard of New Jersey issued $50,000,000 of 2¾ per cent debentures due July 1, 1953, and $35,000,000 serial notes ranging from 1¾ to 2½ per cent due 1943-47. Entire proceeds of the sale were placed in the company's general

Vast Sums Needed

CALLING attention to the vast sums of money needed by the oil industry in its constant race to keep ahead of obsolescence and to keep pace with the steadily growing demand for its products, the New York Times says: "Largely because of these factors, the oil industry has been one of the largest users of capital in the last twenty years. With the sharp increase in the demand for oil products starting late in 1934 and continuing through 1937, the earnings of the industry improved substantially, but because of the undistributed-profits taxes for two of those years, most companies deferred all important rehabilitation programs. The result is that many companies now are finding that much of their equipment has become obsolete, largely because of new developments in the refining, marketing and producing branches, and several of them have embarked upon programs of modernization and expansion resembling somewhat those of ten years ago."

fund and used for general corporate purposes, consisting largely in making available to subsidiaries additional money needed in acquiring and developing crude reserves, improving and extending refining capacity and other uses.

One of the New Jersey principal producing, refining and transporting companies is Humble Oil & Refining Co. whose properties are confined to Texas and New Mexico. Drilling and development expense of Humble has been particularly heavy in West Texas, New Mexico, North Texas, East Texas and the Gulf Coast without compensating increases in allowable production. In some West Texas fields where the spacing patterns were on a basis of one well to 10 or 20 acres the company was not much more than swapping dollars as much as a year ago. Since that time certain fields have undergone adjustments to bring them within their proportionate share of the five-day producing week program.

In an effort to conserve cash for an expansion and improvement program, directors of Standard Oil Co. of New Jersey November 1 declared an extra dividend in capital stock at the rate of three shares for each 200 now outstanding. During the depression, it was necessary to postpone part of the company's modernization program, and on this account the need for large capital expenditures is accentuated.

This year's capital expenditures for the company are estimated to require the equivalent of about $7.40 a share of capital stock outstanding, and of this sum, slightly more than $3 a share would have to come from earnings, based on profits for the years 1935 to 1937, inclusive.

Conserving Cash

Regarding the alternative to the conservation of cash additional borrowing in the capital markets, "the directors feel that it is not now desirable to borrow additional funds," W. S. Farish, president, stated following the directors' meeting. He pointed out that the company, in August, sold $85,000,000 of debentures and notes to the public, which increased funded debt to $170,000,000. In addition, approximately $78,000,000 has been borrowed by the parent company from the trustees of the annuity trusts.

Mr. Farish also said that in order for the company to do its part in stimulating business recovery and providing greater employment, the directors considered it desirable to authorize the completion of these deferred capital expenditures.

Over the three-year period—1935 to 1937, inclusive—Standard and its consolidated subsidiaries had available from depreciation, depletion, amortization and retirements an average of $115,000,000 per annum. At present the company is faced with the necessity of spending at the rate of about $195,000,000 per annum for the maintenance, replacement, and extension of its plant, equipment and properties.

"Consequently, it would appear that to meet these outlays a sum in the neighborhood of $80,000,000 must come yearly from earnings," Mr. Farish said. "The latter have averaged over the three years in question about $140,000,000 per annum in the consolidated income account before deduction of amounts applicable to minority interests in common stocks. If $80,000,000 be deducted from this figure there is available $60,000,000 for cash dividends to the stockholders of the parent company and to minority stockholders of its subsidiaries, whereas in the past three years cash dividends have averaged $82,000,000 per annum. It is apparent, therefore, that the company must either conserve its cash or face the necessity of further borrowing."

"A company which is engaged in the development of a natural resource, such as petroleum, for which the demand has rapidly increased, is repeatedly faced with the necessity of providing large amounts of new capital for development if it is to maintain its relative position in the industry and meet its obligations to serve the public," Mr. Farish commented.

"To do this it must constantly strive to improve its products and reduce operating costs. The carrying out of such a policy requires the continuous investment of capital for modernization and for the application of new and improved methods. Also new money is required in the search for oil in order to maintain adequate supplies of crude, not only to replace current production as it is used, but to provide sufficient reserves for the future."

Building Program

Continental Oil Co. early in November filed with the security commission a registration statement covering the intended issuance and sale of $21,071,600 of 10-year convertible debentures.

Of the net proceeds to be received from sale of the debentures, $2,500,000 will be used to repay all present bank loans. The company said its general funds have been and may be used in exploring, buying and developing oil and gas properties, and in improving refineries, transportation and marketing facilities.

Outlays for such purposes in the eight months ended August 31, 1938, totaled about $13,300,000. About 73 per cent of this was used in connection with exploiting, buying and developing gas and crude oil producing properties.

Plans for a $1,500,000 refinery building program, to install a cracking unit to increase the gasoline manufacturing capacity at Continental Oil Co. Ponca City refinery were announced by President Dan Moran. Construction of the new equipment will begin before January 1, and is expected to be completed by August, 1939. Included in the revisions will be the remodeling of certain equipment to permit the continuance of the production of coke at the Ponca City refinery.

The announcement of the building program at the Ponca City refinery follows completion of a $500,000 expansion program at the company's Denver refinery and recent construction work at plants at Artesia, N. Mex., and Baltimore, Md.

Private Loans

By acquiring a private loan of $25,000,000 Consolidated Oil Corp. was enabled to call for payment its outstanding 5 per cent preferred stock consisting of 54,041 shares in the hands of the public. The new Consolidated loan runs for 12 years.

Thirty per cent of Ohio Oil Co. outstanding 6 per cent cumulative preferred stock on a prorata basis was paid on September 15, 1938, at $110 per share. As of June 30, 1938, outstanding preferred stock amounted to 548,077 shares. This refinancing reduced outstanding preferred stock from $54,607,700 to approximately $35,500,000. For the purpose of retiring these shares the company stated that it had raised $21,000,000 by private sale of notes and debentures consisting of $7,000,000 of serial notes due 1939-45 issued privately to a bank and $14,000,000 of its 13-year 3¼ per cent sinking fund debentures due August 1, 1953, which were privately issued to an insurance company.

Phillips Petroleum Co. recently sold $25,000,000 of convertible 3 per cent debentures due September 1, 1948. Proceeds from the sale were applied to the purchase and retirement of $6,000,000 of its outstanding serial notes and the remainder of the proceeds, or $15,000,000 was added to the company's working capital.

Shell Union Oil Corp. sold in June, 1938, $25,000,000 of 3% per cent debentures in a private transaction with an insurance company. The debentures are due June 1, 1953. Proceeds were to be used to liquidate $3,500,000 indebtedness owing to an affiliate, for property development and additions and for other corporate purposes.

Standard Oil Co. of Ohio in June, 1938, sold privately $5,000,000 of 3½ per cent sinking fund debentures due June 1, 1948. Net proceeds from sale of debentures were used as follows: $700,000 to repay certain short-term bank indebtedness of the company; $2,000,000 to reimburse company for expenditures previously made for capital improvement and in acquiring fixed assets; remainder of net proceeds was to be used as working capital and for acquisition of additional fixed assets.

Below is a list of the financing and refinancing done so far this year by the major units in the petroleum industry:

Company—	Issue	To whom issued
Atlantic Refining Co.	$ 25,000,000	Public
Consolidated Oil Corp.	25,000,000	Private
Ohio Oil Co.	21,000,000	Private
Phillips Petroleum Co.	25,000,000	Public
Shell Union Oil	25,000,000	Private
Standard Oil Co. of New Jersey	85,000,000	Public
Standard Oil Co. of Ohio	5,000,000	Private
Continental Oil Co.	21,000,000	Public
Total	$232,000,000	

Two Large Refineries

(Continued from Page 34)

heavy cracking operation, the octane ratings of the gasoline are comparatively high.

A visitor is struck by the fact that each phase is more than a refinery operation. The company's responsibility does not end at the refinery gates. While many of the employes live in the adjoining towns, the companies in both cases furnish homes for practically all of the foreign employes.

The Lago company has 477 homes for its foreign staff and bachelor quarters for 400 men. It has built 100 homes for the skilled employes with bachelor quarters for 144. While operated by a different company (the Lago Shipping Co., Ltd.) Aruba is the headquarters for the operation of tankers. All this housing has modern conveniences, including light and water and kerosene for cooking.

A large hospital is maintained. Amusement centers include a large club house, bathing beaches, tennis courts and facilities for other sports. Aid is given in the maintenance of schools.

These auxiliary operations are necessary because otherwise they would not be available. The population was small at the time the refineries were built and companies found it necessary to provide modern facilities for the large number of experienced employes brought in from Netherlands, England and the United States.

This in effect means that the companies are not only refinery operators but also have the duties of mayor, city council, school board and hospitalization. It follows that in an operation of this kind more stress than usual has to be placed on industrial and personnel operations.

In industrial relations the Lago company follows the same general policies adopted by the parent company for operations in other countries. Special attention is paid to the training of employes, many of whom come from the surrounding area. There is practically no unemployment on the island.

The 4,200 employes are given representation in the administration of the company's activities. This includes arrangements whereby elected representatives have definite responsibilities in connection with housing, maintenance of streets, hospitals, schools, clubs, and other facilities not directly connected with the operation of the refinery.

ENGINEERING and OPERATING

In This Issue

GAS LIFT BEING USED TO GREATER EXTENT IN THE EAST TEXAS FIELD
By George Weber ..... Page 38

Several factors are responsible for the increased use of gas lift in the East Texas field. Important among these are recent improvements in methods and equipment; new interest in this technique has come with the discovery of gas reserves in deep horizons near the field.

HIGH TEMPERATURE CHARACTERISTICS OF FIVE SPECIAL STEELS
By A. E. White, C. L. Clark and W. G. Hildorf ..... Page 43

This is the second half of a description of an exhaustive study of high temperature characteristics of five steels containing silicon, chromium, and molybdenum. This is particularly interesting since refining work is calling for equipment capable of withstanding abnormally high temperatures and pressures which are sure to assume greater importance.

EAST TEXAS TREATING PLANT FOR WATER DISPOSAL ATTRACTS ATTENTION ..... Page 50

Brine disposal problems are occupying a large share of the attention of petroleum engineers in the East Texas field. In this article a description is given of the plant of a major company built for the purpose of dealing with the needs of brine disposal and pressure maintenance.

TIME RECORDS AID PURE OIL CO. IN ILLINOIS DRILLING PROGRAM
By Harry Simons ..... Page 56

Pure Oil Co. solved the geologic correlation problem on their numerous Illinois operations by using the ledger system of filing their drilling time records and cutting sample data. The drillers began using the information gained to help them judge the conditions of the bit in the hole and thus increased footage per bit.

METAL PROGRESS—*By W. L. Nelson* ..... Page 40

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QUESTIONS ON TECHNOLOGY—*By C. K. Francis, Ph.D.* ..... Page 57

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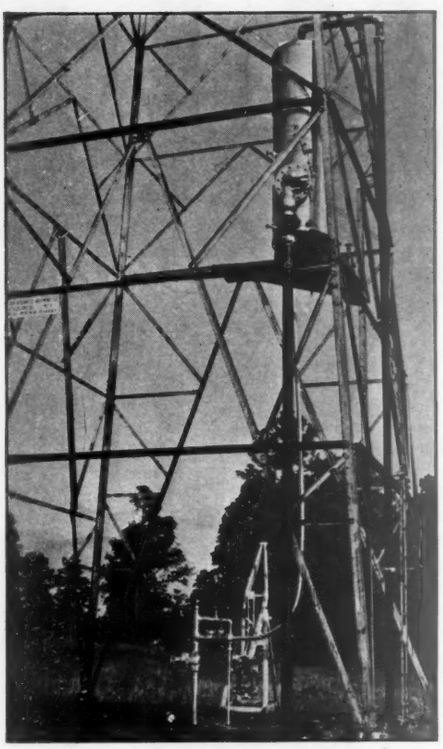
Gas Lift Being
Scale in East



A gas lift well with elevated separator. The pumping jack was installed before gas lift, but has been replaced

By GEORGE WEBER

A growing interest in the use of gas lift is evident in the East Texas field at the present time. As additional wells in considerable numbers are being studied for artificial lift installations the use of this type of production is being given more attention than at any time in the past.

This is due to a number of developments. Among the more important ones are the improvements in methods and equipment, which manufacturers of gas lift valves and intermitters have accomplished. Added experience of pioneer operators on gas lift is also a factor in the willingness of others to consider this method. The results of tests showing added recovery of natural gasoline content in gas from wells in this class is expected to increase the interest of natural gasoline plant operators in cooperating in new installations.

One of the most important of the immediate reasons for this new interest in gas lift, however, is the discovery of sizable gas reserves in deep horizons near the field. In one case, the Hunt Oil Co. is planning to use gas from its Chapel Hill discovery well west of the field, reported capable of making in excess of 30,000,000 feet of gas daily. This gas is being used at present in eight Hunt wells, which are serving as a test group for various gas lift manufacturers. On the basis of findings from this experiment the company will place about 200 wells on gas lift, utilizing the high-pressure gas, which will also be available to other operators for the same purpose. Similar use may also be made of other gas reserves recently opened near the field, adding to the impetus of gas lift interest among East Texas operators.

This development removes one of the principal reasons for the general lag in gas lift adoption in the field. The supply of high-pressure gas from natural gasoline plants was limited by plant operators' disinterest in furnishing gas and processing the gas output. The cost of compressing gas for a system of a few wells was in most cases prohibitive. The supply of high-pressure field gas may then prove to be a decided factor in future gas lift application in the field.

As shown on the accompanying chart, the installation of gas lift has lagged far behind pumping units in the past two years in East Texas. With an estimated 750 units now in use in the field, the rate of new gas lift jobs is gaining, and according to indications at present, the gain will continue as the field goes to secondary production.

Large Systems

Of nearly 750 wells now on gas lift in the field, almost 40 per cent are operated by two major oil companies, the total number of companies utilizing this lifting method is very small in comparison to those maintaining pumping units.

One major oil company has incorporated all of its gas lift wells into two systems, using its large natural gasoline plants as central units for furnishing high-pressure residue gas, and processing gas production, for increased gasoline content. The same system is used by another producing company, which is furnished residue gas from an independent plant on the same basis.

The greater share of the remaining wells on gas lift in the field get their gas from compressor units located on or near the leases. These compressor plants vary in size from large units serving several wells, to small portable compressors which can be moved from location to location to flow individual wells. The cost of compression has been a factor in limiting this type of operation.

The third source of gas, and one that is showing the greatest possibilities at present, is from gas wells. Two companies are now using production of their own gas wells in flowing their oil wells in the field.

At present, about 280 gas lift wells are operating on gasoline plant residue gas which is recycled through the plants. A total of 20 are supplied with field gas, and the remainder use gas from compressor units.

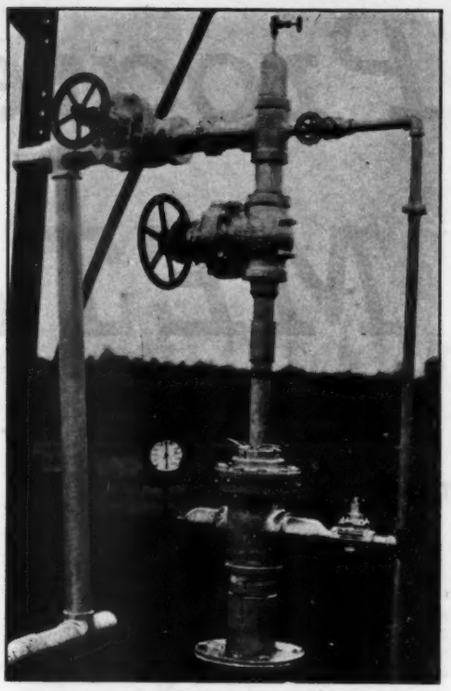
A wide range of producing conditions in East Texas complicate the problem of fitting wells for efficient gas lift. It is conceded, that with the improved types of intermitters and flow valves now available, that any well in the field which could be artificially produced could be lifted with gas. This is by no means economically feasible in many cases, however.

The large quantities of water to be lifted in wells on the west edge of the field, place gas lift at a decided disadvantage to pumping. On the east edge where fluid levels are low, gas lift is impracticable in many cases. However, it should be pointed out that wells with very low bottom-hole pressures and fluid levels are being successfully produced in this manner.

The greatest use for gas lift is in the central section of the field, in wells which, although they will not flow naturally, will produce their allowable with very little lift. However, since gas lift has taken on more

Running a bottom-hole pressure bomb to determine conditions in a gas lift well

Used On Large Texas Field



Typical gas lift connection in East Texas, using 250 pounds of input gas

permanent status, with expectation of producing wells to depletion, the study of well conditions and the adaptation of the method to their production is a highly specialized problem.

With a variety of good intermitters and valves now available, the problem is not primarily to make the wells flow their allowable, excepting in marginal cases, but to produce them in the most economical manner possible. This economy pertains directly to gas-oil ratios.

Two Systems Used

The necessity for keeping pressure off the formation in wells on artificial production has limited the use of gas lift methods with the more improved types of intermitters and flow valves, with packers set above the sand. In general two systems are used. In a well which maintains a fluid level high enough so that its daily allowable may be produced in one head, the open type is used.

In the open system, the tubing is perforated above the packer as well as below, with a standing valve usually set just above the packer. The build-up of oil in the well, fills the tubing and the annular space between casing and tubing to a level where the oil above the packer comprises the well's daily allowable production. This oil is then lifted to the surface by introduction of gas under pressure to the casing. Flow valves set at intervals above the standing valve will successively lift the oil which was initially forced upward by the U-tube action of the pressure on the casing.

For wells with lower bottom-hole pressure and fluid levels, the closed system is used. The tubing is not perforated above the packer and the casing is dry. This system operates generally on the intermittent flow, determined by the build-up of the fluid column to a certain pressure above the first valve.

A large number of different types of flow valves and intermitters is in use in the field. The newly improved types of automatic flow valves, which operate on combinations of pressure differential between the casing and tubing, and on velocities of gas through the valve or fluid up the tubing, offer varieties to fit any individual well condition. Their correct setting in the flow string, and the use of the right valve springs and pins greatly determine their efficiency. Several factors are involved in obtaining the correct conditions of gas lift in some wells.

In general gas pressures of from 230 to 270 pounds are found to be most satisfactory. A constant pressure on the casing is important, particularly where intermitters are used. In valves which operate on pressure differential, opening with a certain head, or tubing pressure, and closing when the differential between tubing and casing pressure has increased to a fixed point, it is necessary that the closing point be kept above a point where the injected gas ceases to do work on the lifted oil column. The setting of kick-off pressures at low values, with a fixed differential between opening and closing pressures will often result in a considerable flow of gas through the valve before it closes, and in some cases the valve may not close, necessitating resetting.

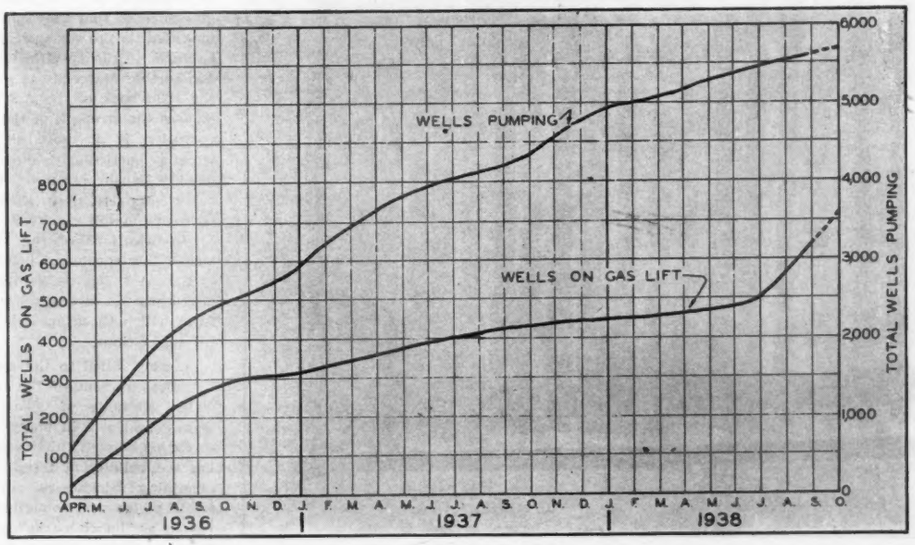
Build-up periods are also important factors to consider in obtaining good lifting results. In wells which are producing from a sand section of low permeability, the rate of build-up slows up considerably as the fluid level approaches its highest possible point, and it may take several hours for the well to reach static equilibrium. To set an intermitting valve so that it opens at a pressure too near the ultimate head, will result in the well heading only at long-time intervals. A change in the spring setting to allow the valve to kick off at a lower pressure, at the same time keeping the closing pressure from going below the minimum, will result in more heads of less oil, comprising more overall production. Lowering of the valve in many cases will obtain the same results.

In some low bottom-hole pressure wells, it has been found that use of an intermitter opening at low head on the bottom, in combination with flow valves up the hole will solve the lifting problem with low gas input and increased production. In cases where valves are set at minimum closing pressure, and the well does not build up sufficiently fast to give enough heads, the well may be manually produced by rocking. This consists of injecting some high-pressure gas into the tubing, and artificially kicking off the valve.

In most cases in the field where high-pressure gas used in gas lift is a major factor in the cost of production, the input gas-oil ratio is closely watched. Periodic tests on wells is found to give good results in decreased production costs. An orifice meter is installed in the input gas line, and a careful measurement is made of input gas, oil production and output gas. Changing fluid levels and incorrect valve settings will show up in increased gas-oil ratios.

If gas-oil ratio increases rapidly at some point after the well has begun flowing, it is an indication that a valve is stuck open, and that gas is blowing around into the tubing as soon as the fluid level in the casing is depressed to the level of the faulty valve.

By constant inspection of this type, one company, maintaining over 100 wells on gas lift has been able to cut the input gas-oil ratio to an average of about 700 to 750 feet per barrel of oil. This average includes gas input in several low-pressure wells which require gas in excess of 1,000 feet per barrel.



Relation of wells on gas lift to pumping wells

Progress in METALS

By W. L. NELSON

Corrosion Test Specimens and Holders

In the final analysis, our knowledge of corrosion in the petroleum industry is so scant that actual field exposure or laboratory tests which closely simulate field conditions must be employed. Thus, the methods of installing field-test specimens and conducting laboratory exposure tests become of primary importance. However, the many types and conditions of corrosion make it impossible to designate a single test procedure or a single method of mounting specimens that is applicable to all conditions.

The methods used in mounting of specimens in lines, vapor lines, vessels, etc., is much the same in all installations. In general, several specimens are mounted in some sort of frame and attached to special flange plates at flange connections in liquid or vapor lines, or attached to a bolt which may be screwed into the wall of a vessel. The frames and connections are constructed of corrosion resistant material—stainless steel being adequate in most instances. Such frames should be rigid enough to insure against mechanical damage, insulated to avoid possible galvanic effects, and designed so that the specimen cannot be lost except by disintegration.

The spool-type holder shown in Figure 1 incorporates many of the features mentioned above and was developed in A.S.T.M. studies of corrosion testing methods.[1] This type of frame is as near a standard frame as any that have been developed and hence a Bill of Materials and a tabulation of the areas of Standard Specimens is given as Tables 1 and 2.

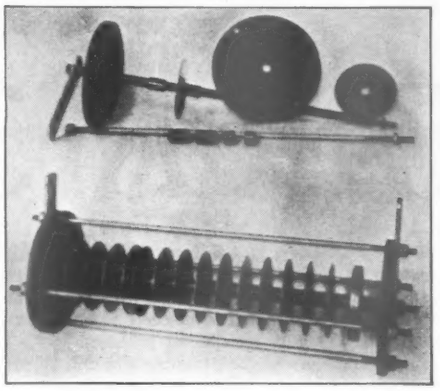


Fig. 1—Spool-type holder

TABLE 1—BILL OF MATERIALS FOR ONE HOLDER

No. required	Name of part—	Material and size—
5	Rods	Monel metal, $\frac{7}{16}$ in. in diameter by 12 in., thread ends 1¼ in., use 10/32 threads.
20	Hex nuts	Monel metal machine screw nuts, No. 10/32.
2	Brackets	Monel metal, 11 U. S. Standard gauge, ¾ in. by 3¾ in., drill 3 holes[a] 7/32 in in diameter.
1	Insulator	Molded bakelite tubing $\frac{5}{16}$ in. in outside diameter by 13/64 in. in inside diameter by 10¾ in.
2	End discs	Molded bakelite sheet 4 in. in diameter by ¼ in., drill 5 holes.[b]
15	Spacers	Molded bakelite tubing, $\frac{7}{16}$ in. in outside diameter by 21/64 in. in inside diameter by ⅝ in.
1	Short spacer	Molded bakelite tubing, $\frac{7}{16}$ in. in outside diameter by 21/64 in. in inside diameter by $\frac{5}{16}$ in.

[a]Locate center of end hole ½ in. from end on long axis, other hole centers are, respectively, 1¾ in. and 2¾ in. from center of first hole.
[b]Drill hole 21/64 in. in diameter at disc center and locate centers of other holes, 7/32 in. in diameter, at four points of quadrant and 1¾ in. from disc center.

TABLE 2—AREAS OF STANDARD SPECIMENS ACCORDING TO THICKNESS

U. S. Std. gauge	Thickness, inches	Area exposed, Sq.dm.	Area exposed, Sq. in.
3	0.2500	0.599	9.286
7	0.1875	0.571	8.847
11	0.1250	0.543	8.409
12	0.1094	0.535	8.299
14	0.0781	0.521	8.080
16	0.0625	0.514	7.970
18	0.0500	0.509	7.883
20	0.0375	0.503	7.795
21	0.0344	0.502	7.773
22	0.0313	0.500	7.752
23	0.0281	0.499	7.729
24	0.0250	0.497	7.707
25	0.0219	0.496	7.686
26	0.0188	0.494	7.664

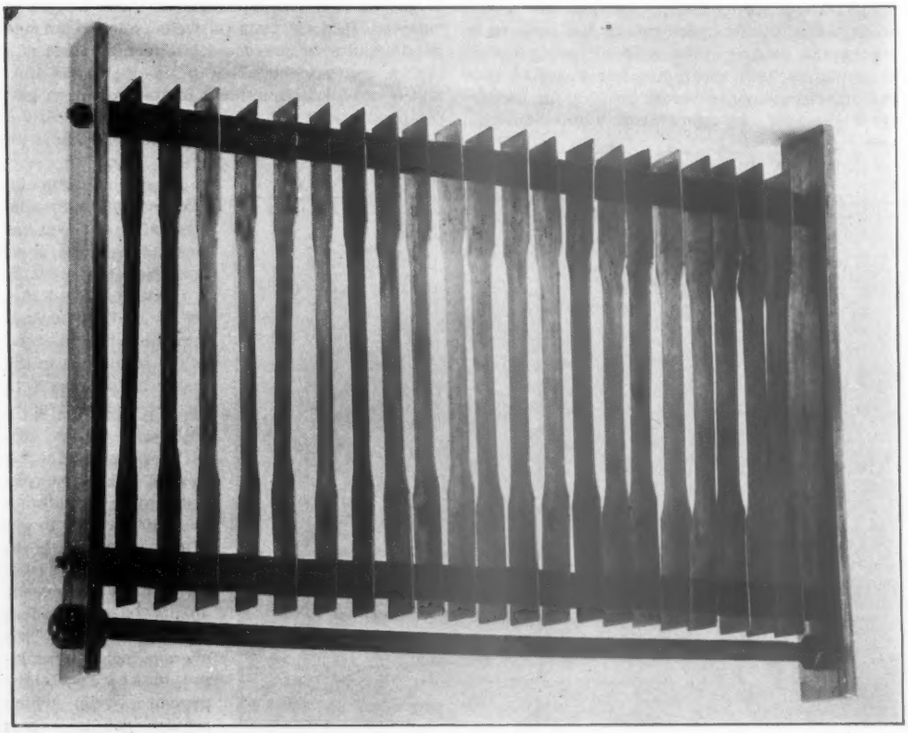


Fig. 2—Rack for alloys used in determining amount of corrosion in refinery equipment

Standard specimens for this setup are machined to an exact diameter of 2.233 inches with a 21/64-inch diameter hole in the center. Experience has shown that it costs about 20 cents to machine a specimen and about $3 to buy the materials and make the parts of a spool-type holder when making lots of 25 holders. The preferred position of the holder is with the long axis horizontal, so that liquid cannot drip from one specimen to the next. The spool may be supported by heavy wire or light chain in vapor spaces, or floated on a piece of wood—and for liquid service may be bolted to tube sheets, walls, or clamped to rotating shafts.

Another type of frame and specimen is indicated in Figure 2. In this arrangement[2] the specimens are machined so that they can be subsequently tested in a modified tensile strength machine. The specimen strips conform to the specifications of the American Society for Testing Materials as given on page 838, Part 1, of the 1936 book of the A.S.T.M. Standards. In many instances the strength of the material that remains after corrosion is of more significance than the loss in weight, particularly should the materials be pitted deeply. Tensile strength specimens are obviously useful in studying dezincified brass samples because the corrosive action results in plugs of porous copper.

Modifications of the above racks and frames for suspending specimens inside of pipe lines are indicated in Figure 3. Devices similar to (a) and (b) in Figure 3 are shown by several authors but the article by Dixon[3] from which these are taken contains many other useful suggestions.

Closely allied to the exposure of the specimens, is the measurement of the thickness of pipe and vessel walls. Methods of measurement are presented by Marek[4] and also in many articles by Newcomb. Measurements of wall thicknesses are essential in establishing the validity of tests of exposed specimens. In determining thicknesses, corrosion resistant buttons or small plates are sometimes welded to the inside of vessels as "bench-marks" for measurements. As a modification of this practice, buttons of different materials

(Continued on Page 48)

HEAT CHARACTERISTICS of 5 Silicon-Chromium-Molybdenum Steels

By A. E. WHITE, C. L. CLARK* and W. G. HILDORF†

In studying the characteristics of five steels containing silicon, chromium, and molybdenum, consideration has been given to oxidation and corrosion resistance.

No attempts were made to determine the comparative corrosion resistance of these steels in this investigation since considerable doubt exists with respect to the ability of laboratory tests to

Second half of paper, the first part of which appeared on Page 43, Dec. 1 issue

indicate the degree of corrosion resistance to be expected in service. It is generally agreed, however, that the resistance to sulfide corrosion in hot petroleum products increases with increasing chromium content. The greatest degree of improvement is obtained upon the addition of the first 2.0 per cent chromium. Additional improvement is obtained as the chromium is further increased, but at a somewhat decreased rate. On this basis Sicromo 1 would possess the least, and Sicromo 5 the greatest, corrosion resistance.

Service results now becoming available definitely indicate that the corrosion resistance to hot petroleum products is further improved by the addition of silicon. Each of the Sicromo steels therefore offers a greater resistance to this type of attack than the corresponding chromium steels with 0.50 max. per cent silicon.

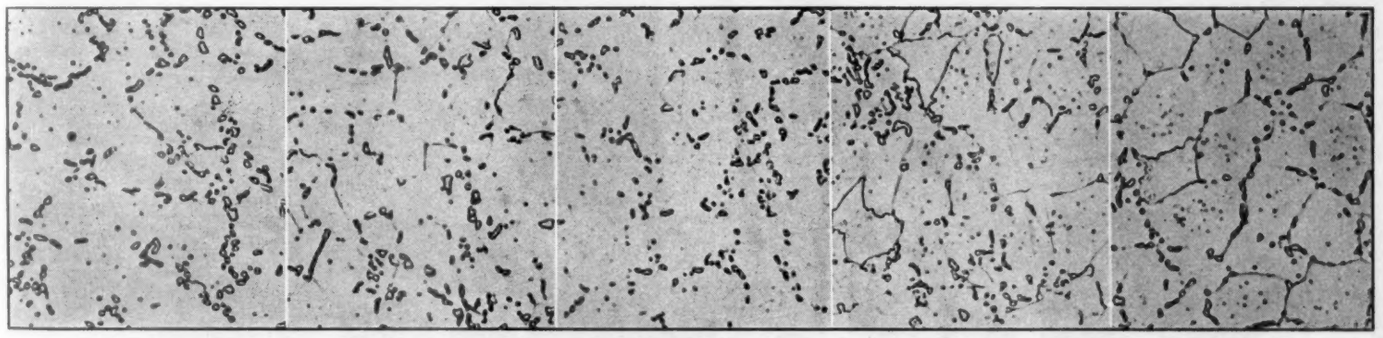
The comparative oxidation resistance of the Sicromo steels is shown in Figure 4. The specimens were heated in air at temperature for 1,000

*Director and research engineer, respectively, department of engineering research, University of Michigan.
†Chief metallurgical engineer, Timken Roller Bearing Co.

TABLE 6—ROOM TEMPERATURE IMPACT RESISTANCE OF SICROMO STEELS AFTER AIR COOLING FROM INDICATED TEMPERATURES

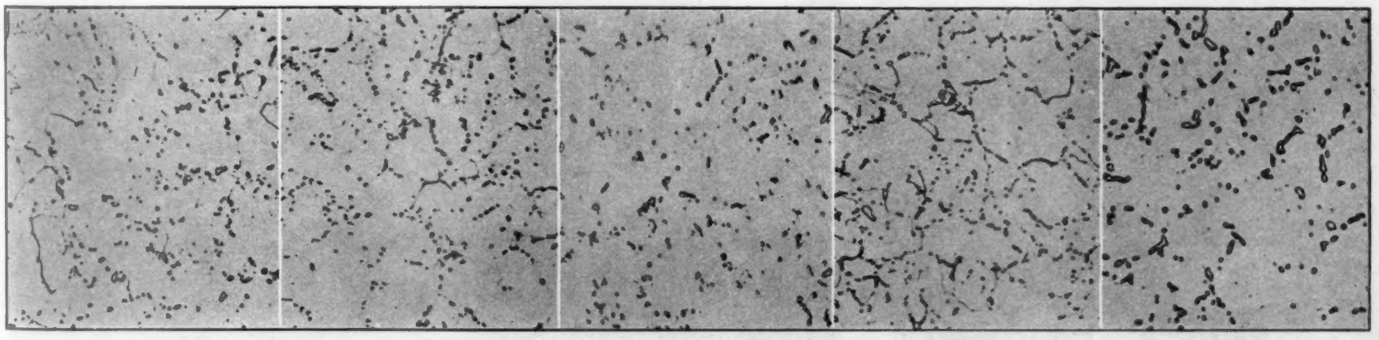
Held 1 Hour at Temperature Prior to Cooling

Steel designation—	Temperature, °F. 80	500	600	750	900	1,000	1,100	1,200	1,300	1,400	1,500
Sicromo 1	36.0	40	38	40	38	42	41	46	46	54	..
Sicromo 2	56.3	55	64	67	64	65	71	72	..	..	..
Sicromo 2½	60.6	66	68	71	67	70	76	78	..	..	..
Sicromo 3	61.3	..	..	..	60	80	66	88	85	83	86
Sicromo 5	69.3	..	..	..	..	82	82	85	83	88	83
Held 1,000 Hours at Temperature Prior to Cooling											
Sicromo 1	36.0	39	40	34	44	46	44	50	..	..	..
Sicromo 2	56.3	64	60	72	70	46	54	62	..	..	..
Sicromo 2½	60.6	64	72	68	90	68	71	..	..	..	..
Sicromo 3	61.3	..	..	..	70	61	58	55	67	80	80
Sicromo 5	69.3	..	..	..	..	79	71	62	63	78	79



Original structure | 900° F.—1,070-hour—15,000 pounds pressure | 1,000° F.—1,070-hour—6,000 pounds pressure | 1,100° F.—1,030-hour—4,000 pounds pressure | 1,200° F.—1,030-hour—2,000 pounds pressure

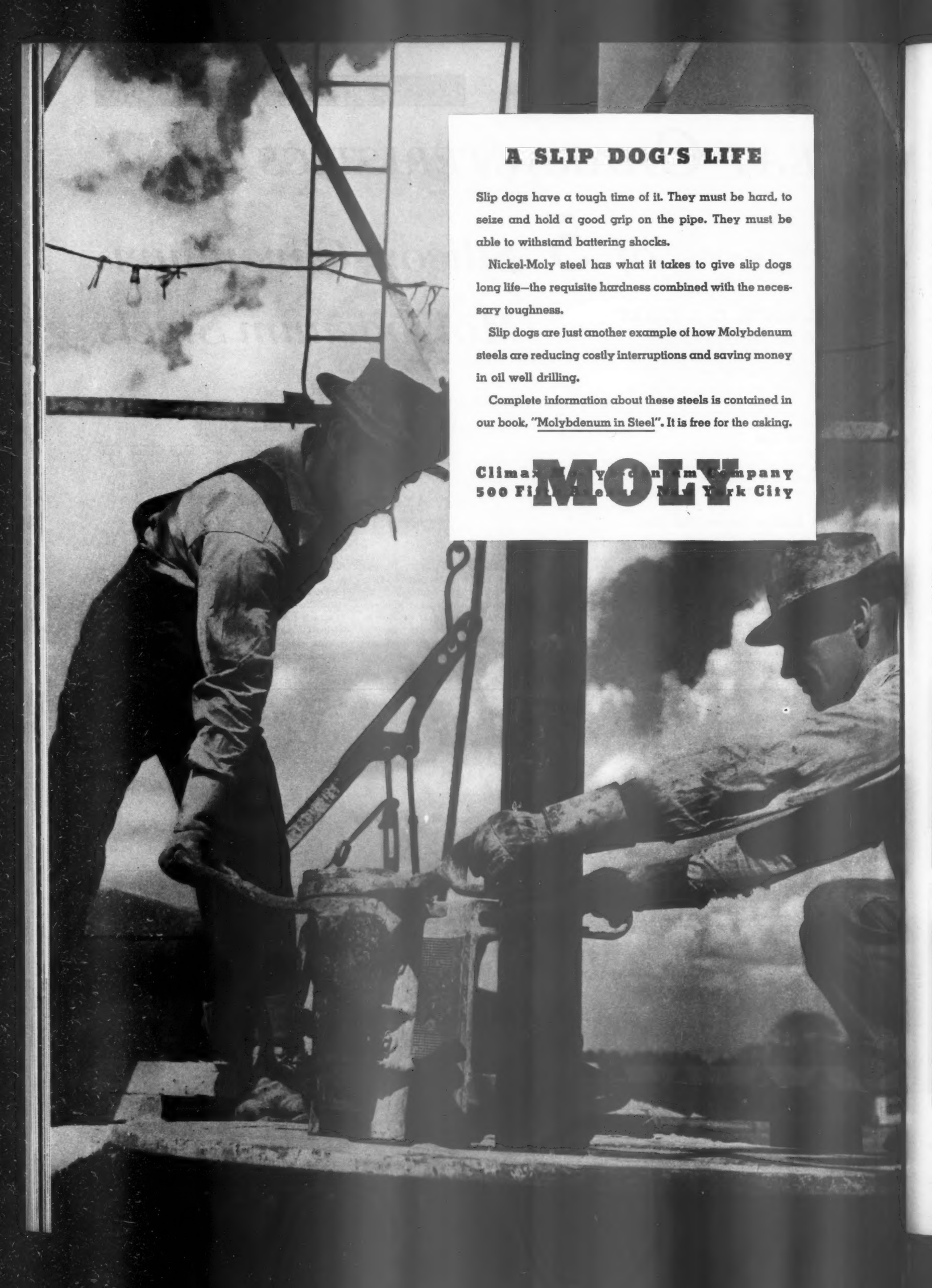
(a) Sicromo 1 steel



Original structure | 1,000° F.—1,075-hour—10,000 pounds pressure | 1,100° F.—1,050-hour—4,000 pounds pressure | 1,200° F.—1,140-hour—4,000 pounds pressure | 1,300° F.—1,070-hour—1,250 pounds pressure

(b) Sicromo 5 steel

Fig. 5—Influence of time, temperature and stress (creep tests) on the microstructures of Sicromo 1 and Sicromo 5 steels—X1000D



A SLIP DOG'S LIFE

Slip dogs have a tough time of it. They must be hard, to seize and hold a good grip on the pipe. They must be able to withstand battering shocks.

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hours, the scale removed by an electrolytic method, and the weight loss reported as grams per square inch of original surface.

It is apparent that in the case of the Sicromo steels the resistance to oxidation increases as the chromium content is raised. The improvement is relatively slight as the chromium is raised from 1.0 to 2.0 per cent and considerably more pronounced as it is further increased beyond this amount. In fact, under the given test conditions, the Sicromo 5 steel possesses at 1,500° F. a resistance comparable to that of the 18 Cr-8 Ni and the 17 per cent chromium steels.

That silicon is more influential than chromium in imparting oxidation resistance can be seen through a comparison of Sicromo 2½ and Sicromo 1, Sicromo 2 and Cr.Mo., and Sicromo 5 and 4-6 Cr.Mo. steels. In fact these, and other, results indicate that in the presence of chromium, silicon is seven times as effective as chromium in imparting oxidation resistance.

The results presented clearly show that increased silicon content provides an effective, and relatively inexpensive, means of obtaining a high resistance to oxidation.

High Temperature Stability

The relative degree of high temperature stability under the influence of time and temperature can be obtained by impact tests on specimens air cooled after heating for various time periods. The additional influence of stress on this stability can be determined by room temperature tensile and impact tests on the completed creep speciments, by the hot ductility of the more prolonged stress-rupture specimens, and by a metallographic examination of both the creep and stress-rupture specimens.

Heat Embrittlement Tests

The results obtained from impact tests on specimens which were air cooled after heating

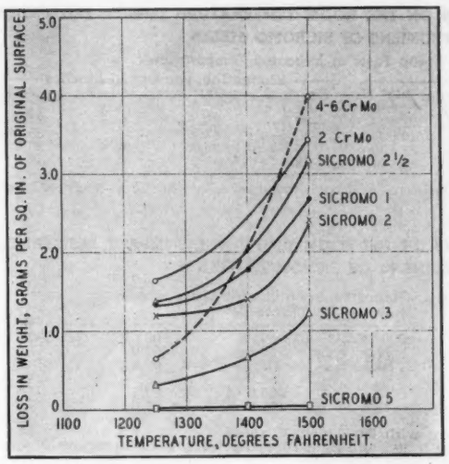


Fig. 4—Comparative oxidation resistance of the Sicromo steels and lower silicon steels with corresponding chromium contents

for 1 hour and 1,000 hours at a series of temperatures are given in Table 6. Standard Charpy specimens were used with a keyhole notch. This test is believed to be of value as a means of indicating a steel's susceptibility to temper-embrittlement.

In the case of the one hour heating tests, all of the steels, after air cooling from the designated temperatures, showed an impact resistance equal, or superior, to that of the original room temperature impact resistance. With a few exceptions the same was likewise true after the 1,000-hour heating period. The maximum decrease, in the case of the few exceptions, was of the order of 2 to 5 foot-pounds and it may, therefore, be concluded that increased time at temperature had little, if any, influence.

These results definitely indicate that none of the Sicromo steels lose their impact resistance under the action of time and temperature.

Tensile Properties of Completed Creep Specimens

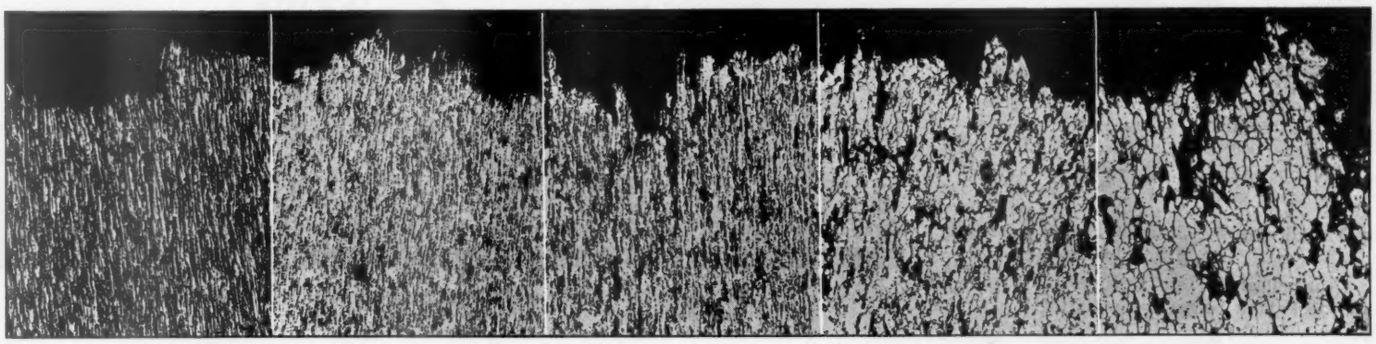
The results from room temperature tensile tests on the completed creep specimens are given in Table 7. For brevity, only the tensile strength and elongation values are considered as these are the two characteristics most generally influenced under the combined action of time, temperature and stress.

The values presented clearly indicate the high stability of the room temperature tensile properties of these steels. The creep tests at 1,000 and 1,100° F. have had practically no influence on either the tensile strength or elongation. Those at 1,200° F. have, in certain cases, slightly decreased both of these characteristics, due to spheroidization during the tests. The maximum decrease in the tensile strength value, even after the 1,200° F. test, was however only 4,500 pounds. The maximum decrease in elongation was likewise slight, being of the order of 3.0 per cent.

Impact Resistance of Completed Creep Specimens

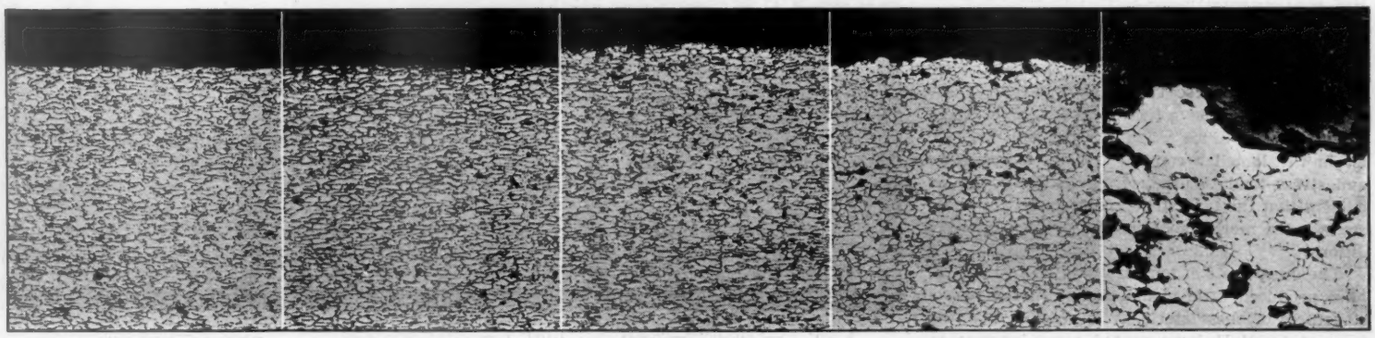
The room temperature Izod impact resistance of the completed creep specimen is given in Table 8. The creep tests at temperatures up to 1,000° F. have had little influence on the shock resistance. The same is likewise true of the 1,100 and 1,200° F. tests in the case of the three steels with the lower chromium contents. The higher temperature creep tests did lower to some extent the room temperature impact resistance of the Sicromo .3 and Sicromo 5 steel. The minimum value obtained was, however, still of the order of 60.0 foot-pounds, which is very ample.

The total elongation, up to fracture, of the specimens which required the maximum time for



1,000° F.—930-hour—17,500 pounds pressure | 1,100° F.—1,044-hour—10,000 pounds pressure | 1,200° F.—927-hour—6,000 pounds pressure | 1,300° F.—2,987-hour—3,200 pounds pressure | 1,500° F.—2,268-hour—1,000 pounds pressure

(a) Microstructures of actual fractures showing the type and characteristics of the fracture



1,000° F.—930-hour—17,500 pounds pressure | 1,100° F.—1,044-hour—10,000 pounds pressure | 1,200° F.—927-hour—6,000 pounds pressure | 1,300° F.—2,987-hour—3,200 pounds pressure | 1,500° F.—2,268-hour—1,000 pounds pressure

(b) Microstructures of the surface showing the degree of surface and structural stability

Fig. 7—Influence of time, temperature and stress (rupture tests) on the surface and structural stability of Sicromo 5 steel—X100D

TABLE 7—INFLUENCE OF CONDITIONS OF CREEP TESTS ON THE ROOM TEMPERATURE TENSILE PROPERTIES OF THE COMPLETED CREEP SPECIMENS OF SICROMO STEELS

(Designated Properties Before and After Creep Tests at Indicated Temperatures)

Steel designation—	Tensile strength, lbs./sq. in.				Elongation, per cent in 2 inches			
	Original	1,000° F.	1,100° F.	1,200° F.	Original	1,000° F.	1,100° F.	1,200° F.
Sicromo 1	80,400	81,250	81,000	76,000	34.0	34.5	34.0	32.5
Sicromo 2	75,100	75,100	74,750	72,400	37.0	38.0	36.0	33.8
Sicromo 2½	74,400	73,400	...	70,000	38.5	38.8	...	35.3
Sicromo 3	84,900	83,400	83,500	81,100	35.8	33.3	35.5	36.0
Sicromo 5	82,100	81,500	79,900	80,400	38.8	37.5	37.5	38.3

Note: Creep tests conducted for a minimum of 1,000 hours and each reported value is the average of tests on two completed creep specimens.

TABLE 8—INFLUENCE OF CONDITIONS OF CREEP TESTS ON THE ROOM TEMPERATURE IMPACT RESISTANCE OF THE COMPLETED CREEP SPECIMENS OF SICROMO STEELS

Steel designation—	Izod impact resistance, foot-pound, after creep tests at indicated temperatures*					
	Original	800° F.	900° F.	1,000° F.	1,100° F.	1,200° F.
Sicromo 1	59	..	47.3	50.8	51.0	57.0
Sicromo 2	87	..	90.5	81.5	68.8	83.5
Sicromo 2½	94	92	...	90.8		87.8
Sicromo 3	80	..	...	108.0	67.5	60.0
Sicromo 5	100	..	...	101.5	68.0	80.8

*Specimens smaller than standard: 0.365 inch square with 0.050-inch V notch.
Note: Creep tests conducted for a minimum of 1,000 hours and each reported value is the average of four tests, that is, duplicate tests from two creep specimens.

TABLE 9—HOT DUCTILITY OF THE MORE PROLONGED STRESS-RUPTURE SPECIMENS OF THE SICROMO STEELS

(Elongation, Per Cent in 2 Inches, of Specimens Fractured at Indicated Temperatures and Time Period)

Steel designation	900° F.		1,000° F.		1,100° F.		1,200° F.		1,300° F.		1,500° F.	
	Time	Elongation	Time	Elongation	Time	Elongation	Time	Elongation	Time	Elongation	Time	Elongation
Sicromo 1	...	...	1,505	18.0	1,294	50.0	1,705	57.0	....	...	....	...
Sicromo 2	2,300	42.0	1,336	51.0	1,548	62.0	926	63.0	....	...	....	...
Sicromo 3	....	...	1,385	52.5	2,068	59.5	1,920	50.7	1,000	57.0	1,368	27.5
Sicromo 5	....	...	930	55.5	1,044	63.5	927	75.0	2,987	44.0	2,268	74.0

fracture in the stress-rupture tests at each temperature is given in Table 9. The magnitude of this value is important for it is a good indication of a steel's susceptibility to fracture without appreciable deformation under the combined influence of time, temperature and stress. Low ductility values are usually the result of either surface or structural instability.

From the values given it is apparent that, with one possible exception, these steels possess a very high degree of hot ductility as the fracture time is increased up to a maximum of 3,000 hours. The single exception is Sicromo 1 steel at 1,000° F., which possesses an elongation value of 18.0 per cent. This degree of ductility would be ample provided it did not continue to decrease as the time for fracture was further extended. This relatively low value is believed to result from the fact that this steel strain-hardens to a pronounced degree at 1,000° F. If this is the case, then the ductility should increase, rather than decrease, with further extension of the fracture time.

Metallographic Structures of Completed Creep Specimens

A metallographic examination was made of all the steels both before and after the creep tests. Space will not permit the inclusion of all the resulting microstructures but, in order to demonstrate the structural stability of these steels under the conditions of the creep tests, representative microstructures are shown in Figure 5 for the lowest and highest chromium-bearing steels; that is, Sicromo 1 and Sicromo 5.

In the original condition, that is, furnace cooled from 1,550° F., these two steels, as well as the remaining three, have their pearlite in the spheroidized form. Since when the pearlite does exist in the lamellar condition, time, temperature and stress tend to produce spheroidization, it is evident that the type structure possessed by these steels is the more stable under the creep test conditions.

The creep tests at temperatures up to 1,200° F. have produced little visual change in the microstructures of these steels. It is possible that the tests at 1,200° F. have caused some increase in the degree of spheroidization but, if so, it is hardly detectable. With Sicromo 5, the creep tests at 1,300° F. have produced a pronounced increase in the degree of spheroidization, the spheroidized carbides having become larger and having migrated to the grain boundaries. This structural change has, however, produced little effect on the resulting room temperature physical properties.

At temperatures up to 1,200° F. these Sicromo steels do therefore possess a very high degree of structural stability. At the more elevated temperatures, additional spheroidization occurs but since this represents a change only in degree, rather than in type, the effect on the physical properties is not as pronounced as in these steels in which the pearlite originally exists in the lamellar form.

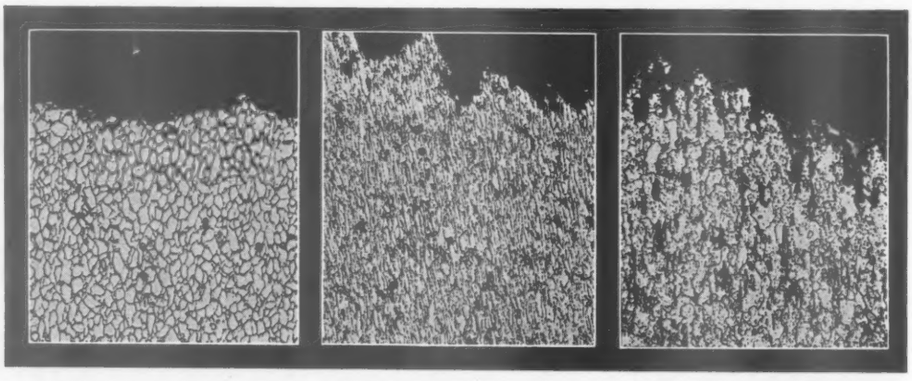
Metallographic Structures of Stress-Rupture Specimens

A micro-examination of the more prolonged stress-rupture specimens yields valuable information with respect to the characteristics of the fracture, the surface stability under the given test conditions, and the structural stability under overstressed conditions. As typical examples of the results which can be obtained the microstructures of the stress-rupture specimens of Sicromo 1 and Sicromo 5 steels are given in Figures 6 and 7, respectively.

First considering the Sicromo 1 steel, Figure 6, it will be noted that the general attack is slight even at 1,200° F. The attack which does occur is somewhat localized and this results in surface pitting. The degree of pitting increases with temperature. With the possible exception of the test at 1,000° F., however, this type of attack has little influence on the resulting hot ductility. In so far as the characteristics of the fracture are concerned, the path of fracture has been intergranular at each of the three temperatures.

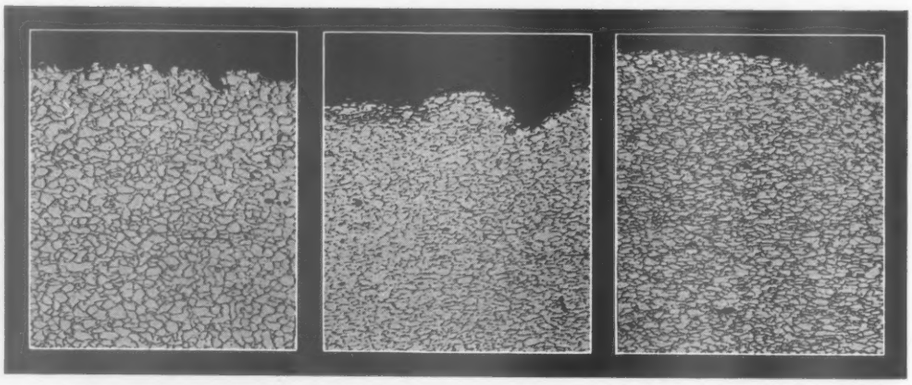
The corresponding structures for Sicromo 5, Figure 7, show this steel to possess a very high degree of surface stability at temperatures up to 1,300° F. and a relatively high stability at 1,500° F. Some surface pitting starts at 1,300° F. and becomes more pronounced at 1,500° F. but the attack is not sufficient to appreciably influence the resulting hot ductility.

Sicromo 5 steel likewise possesses a high de-



1,000° F.—1,505-hour—28,000 pounds pressure | 1,100° F.—1,294-hour—11,000 pounds pressure | 1,200° F.—1,706-hour—5,500 pounds pressure

(a) Microstructures of the actual fractures showing the type and characteristics of the fracture



1,000° F.—1,505-hour—28,000 pounds pressure | 1,100° F.—1,294-hour—11,000 pounds pressure | 1,200° F.—1,706-hour—5,500 pounds pressure

(b) Microstructures of the surface showing the degree of surface and structural stability

Fig. 6—Influence of time, temperature and stress (rupture tests) on the surface and structural stability of Sicromo 1 steel—X100D

Light—

but mighty, mighty tough!

LARKIN BAKELITE FLOAT SHOES

LIGHTER . . . TOUGHER . . . There you have two very good reasons why Larkin Bakelite Float Shoes have had such a tremendous success in all fields.

LIGHTER—because Fabric Bakelite, of which the valves, valve stems, and guides are made, has only half the weight of concrete by volume.

TOUGHER—The Larkin Bakelite Valve has withstood a pressure of 240,000 pounds in actual Hydraulic tests. Furthermore, this Larkin Valve is the mechanically correct Poppet Type Valve similar to that used on all heavy duty engines and pumps. It is machined and lapped, assuring a perfect, water-tight fit.

Bakelite—with a tensile strength of 7000 pounds and a compressive strength of over 28,000 pounds—is 49% stronger than concrete. Yet Bakelite is easily pulverized by the drill and circulated out of the hole.

Fig. 421

A Ball and Seat Type Float Valve has just been added to the Larkin line for those operators who prefer it to the Poppet Type Valve.

LARKIN PACKER COMPANY, INC.
ST. LOUIS, U. S. A.

LARKIN PACKER CO.

gree of structural stability at temperatures up to 1,300° F., but some grain coarsening does occur at 1,500° F. Even at this temperature, however, the grain growth has not been severe even after nearly 2,300 hours under a relatively high stress. The fracture is distinctly intercrystalline at 1,300 and 1,500° F., and likewise at 1,200° F. under higher magnifications.

A similar examination of steels with corresponding chromium contents, but with lower amounts of silicon, definitely shows the marked influence of 1.5 per cent silicon in improving the surface stability. Even with a chromium content of 5.0 per cent pronounced general attack occurs at 1,200° F. when silicon is present in an amount below 0.50 per cent. With the lower chromium contents this marked attack occurs even at lower temperatures.

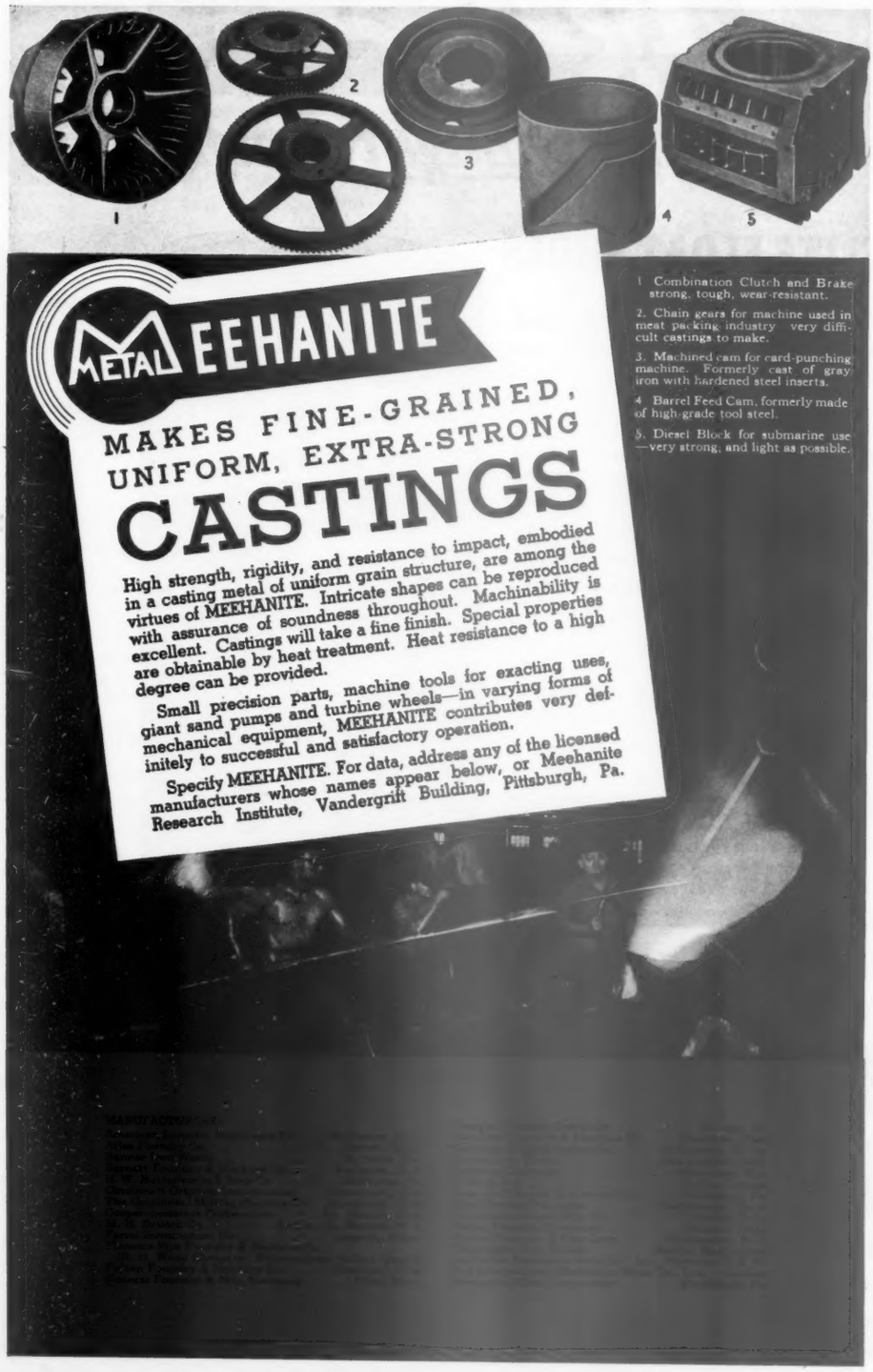
Conclusions

The results presented are believed to prove conclusively that very acceptable steels for high temperature service can be obtained through the addition of silicon, in amounts up to 1.50 per cent, to steels containing varying amounts of chromium and 0.50 per cent molybdenum. The resulting steels possess a very suitable combination of strength, ductility and impact resistance at room temperature.

It is true that, on the basis of 1,000 hour creep tests under slightly oxidizing conditions, the addition of silicon in this amount lowers the creep strength at certain of the elevated temperatures. Because of the increased surface and structural stability which it imparts it does, however, increase the load-carrying ability at these temperatures as indicated by the stress-rupture results. Increased silicon content does, therefore, increase the actual service life even though it does decrease the creep strength.

The Sicromo steels possess a large degree of high temperature stability, retaining their original properties under the combined influence of time and stress at each of the temperatures considered. Their hot ductility characteristics are likewise very good under the influence of time, temperature and stress, thus assuring that brittle type fractures will not be obtained in service.

These steels do therefore provide relatively inexpensive materials for use at temperatures extending up to 1,300° F.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METAL MEEHANITE
MAKES FINE-GRAINED, UNIFORM, EXTRA-STRONG
CASTINGS
High strength, rigidity, and resistance to impact, embodied in a casting metal of uniform grain structure, are among the virtues of MEEHANITE. Intricate shapes can be reproduced with assurance of soundness throughout. Machinability is excellent. Castings will take a fine finish. Special properties are obtainable by heat treatment. Heat resistance to a high degree can be provided.
Small precision parts, machine tools for exacting uses, giant sand pumps and turbine wheels—in varying forms of mechanical equipment, MEEHANITE contributes very definitely to successful and satisfactory operation.
Specify MEEHANITE. For data, address any of the licensed manufacturers whose names appear below, or Meehanite Research Institute, Vandergrift Building, Pittsburgh, Pa.
1 Combination Clutch and Brake strong, tough, wear-resistant.
2. Chain gears for machine used in meat packing industry very difficult castings to make.
3. Machined cam for card-punching machine. Formerly cast of gray iron with hardened steel inserts.
4 Barrel Feed Cam, formerly made of high-grade tool steel.
5. Diesel Block for submarine use —very strong, and light as possible.

METALS

(Continued from Page 40)

are sometimes welded to the inside vessels and subsequently compared with one another for resistance to corrosion.

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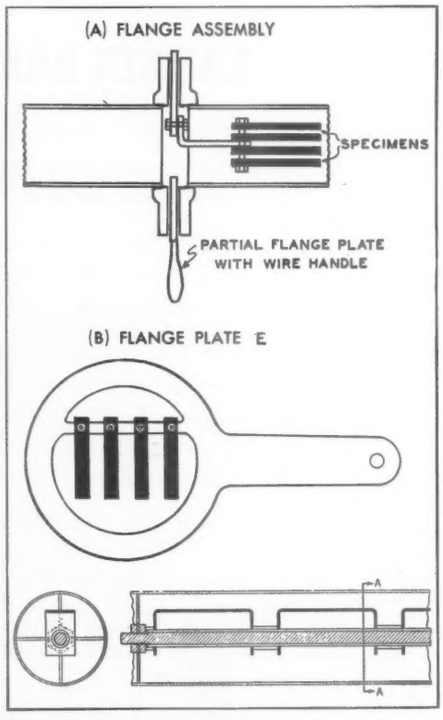


Fig. 3—Racks and frames for suspending specimens inside pipe lines

Anglo-Canadian Refinery Projects

CALGARY, Alberta.—Announcement has been made that Anglo-Canadian Oil Co. is considering construction here of a 5,000-bbl. refinery next spring, at an estimated cost of approximately $1,000,000. Consideration is also being given to a pipe line from Turner Valley to Calgary at a cost of about $500,000. The Anglo-Canadian company and associate interests are now one of the major producing organizations in the field.

Plans for expanding the 800-bbl. Central refinery at Brandon, Manitoba, and installing a cracking plant, are also under consideration; and possibilities of a series of refining plants in the prairie provinces and at the head of the lakes are being studied. The company's plans also involve establishment of its own storage facilities in Alberta, and expansion of its oil outlets.

Yield up 9 points

A certain Texas refiner was cracking topped crude and here is what he was getting:

	PER CENT
GASOLINE	44
RESIDUAL FUEL OIL	48
GAS	8
TOTAL	100

Too much fuel oil, too little gasoline

He changed over to Dubbscracking Here is what he is getting now—from the same topped crude:

	PER CENT
GASOLINE	53
RESIDUAL FUEL OIL	37
GAS	10
TOTAL	100

And it's better gasoline and better fuel oil

The difference between Dubbscracking and near-cracking may keep many a refiner in business through these tough times

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

East Texas Water Disposal Plant Attracts Interest

The problem of salt water disposal is occupying a large share of the petroleum engineer's attention in the East Texas field. For the past several months, experimental projects have been carried on by four oil companies who own production on the west edge of the field.

Numerous approaches have been tried to this problem of combined disposal and pressure maintenance through return of the salt water to the sand from which it was produced. One method, adopted by the Sun Oil Co., has been successful in the experimental stage. At a hearing before the Texas Railroad Commission recently, the company presented data and asked permission to enlarge the scope of the work by including salt water production from additional leases for further experimental uses.

Considerable interest has been evinced in the project of the Sun Oil Co. Interest in a successful method of coping with constantly increasing amounts of salt water, is certain to grow during the next few months. According to the latest survey of the Railroad Commission, a daily average of 106,965 bbls. of salt water was being produced as of October 1, 1938. A total of 3,746 wells were making Woodbine salt water, with an average daily production of 29.32 bbls. of water.

Surface disposal of water production, with its attendant risk of pollution, places an increasing load on the producer who must add continually to costly impounding facilities in the face of decreasing oil production. The solution, in view of added water production to be handled in the future, lies in a successful method of returning the salt water to an underground reservoir.

The Woodbine sand, from which the salt water originally is produced, offers the logical medium for disposal of this water. In addition to the disposal factor, the method accomplishes an equally important result, in the virtual cancellation of the pressure decline occasioned by withdrawal of the salt water with the oil. If widespread adoption of salt water return to the Woodbine sand were effected throughout the salt water sections of the field, the result would be a marked check in the reservoir pressure decline, with recovery of much additional oil over the field as a whole. It has been estimated by Railroad Commission engineers that, at the present increasing rate of salt water production in the field, and continuation of present oil withdrawals, the average reservoir pressure in 1943 would be 743 pounds per square inch. On the other hand, with complete return of all salt water produced, in effect, complete cancellation of the salt water withdrawal factor, the average pressure at the same future date is estimated at 1,096 pounds per square inch. Pressure data compiled from June of 1933 to the present time were used in these calculations.

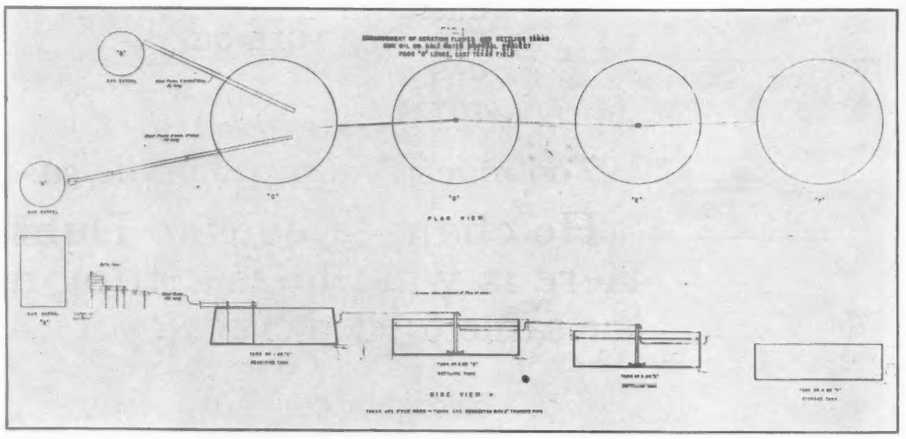


Fig. 1—Arrangement of series of settling tanks

It is obvious that, while total return of all salt water in the field is an indefinite possibility for the future, the practice of returning even a small fraction of this large volume withdrawal would have a beneficial effect in tending to modify the decline in reservoir pressure. Thus the problems regarding this issue are of vital and immediate interest from the standpoint of both disposal and conservation.

Sun Project

Experiments in return of salt water to the Woodbine sand are being carried out by the Sun Oil Co. on the H. A. Pace B lease, in the Juan Vargas Survey, Smith County, on the southwest edge of the field. An order issued by the Railroad Commission on April 28, 1938, empowered the Sun Oil Co., as agents of the commission, to return the salt water produced on the Pace B lease to the lowermost portion of the permeable Woodbine sand.

The well used for injection is the No. 38 Pace B, located 933 feet south and east of the nearest oil producing well, and 1,000 feet from the nearest property line. The test was drilled early in 1938, when it was abandoned after showing only salt water in the Woodbine.

Casing was cemented at 3,722 feet and the well was drilled into the sand with cable tools. Top of the Woodbine sand was 3,738½ feet; total depth was 3,739 feet. The outpost was swabbed and pumped for several days without a show of oil, before abandoning. The top of the sand in the test is below the average water table in that section of the field at the present time.

When the project was begun, the injection well was deepened to 4,007 feet, using fresh water as a circulating medium. An electric log was studied and a suitable shale break was selected; a 5½-inch liner was cemented in this shale break at 3,808 feet, with top of the liner at 3,662 feet; from 3,808 feet the hole was reamed to 9 inches as far as 3,973 feet and washed with fresh water. The water was then swabbed until its salinity reached approximately that of the water in the sand.

The first approach to the experimental work was to use a closed system in handling all salt water returned to the well. This method is used to prevent the formation of insolubles in the salt water due to its exposure to air. Such precipitates will clog the sand pores immediately around the injection well, building up a back pressure which will finally prevent further injection.

Start Aeration

After three weeks of handling the water in this manner, it was found that the chemical change in the water could not be controlled, due to failure of obtaining a completely closed system, and the procedure was abandoned.

Considerable laboratory investigation resulted in the next approach to the problem. This comprised aeration of the salt water to bring about the precipitation of the insoluble compounds in contact with air. These insolubles were then separated from the water by settling and filtering, before introduction to the sand. This method

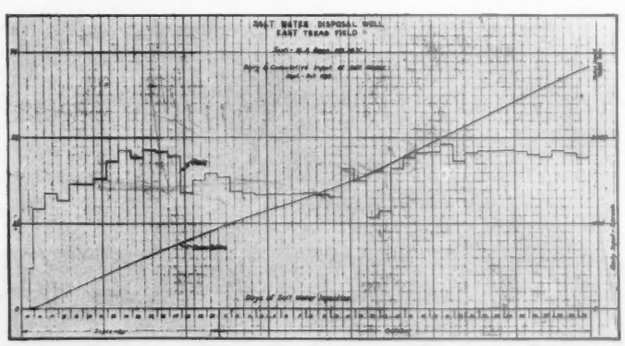


Fig. 2—Record of 45-day experimental injection period

Chemical Process' Acidizing Equipment Must Go Through . . . That's Why They Bank on Internationals

One of the fleets of International Trucks which the Chemical Process Co., Breckenridge, Texas, maintains at strategic points in the fields of the Southwest is shown at the left rolling to location. The other two scenes show Internationals on location pumping acid into the hole. These trucks have 1,000-gallon tanks and pumps on them. On one acidizing job the well was treated with 20,000 gallons in 59 minutes, ten pumps delivering the acid simultaneously.

NO LOCATION is too tough for Internationals to reach when Chemical Process gets calls to treat wells. But getting through to location is just part of the job for these trucks. When they are maneuvered into position, the power take-off on the trucks cut in and the truck engines drive the pumps to force the acid into the hole.

Chemical Process has one of the largest fleets of International Trucks in the oil fields. You see them in Texas, Oklahoma, Kansas, New Mexico, and Louisiana where this pioneer acidizing company has its branch offices and treating stations.

After Chemical Process was organized in 1932 at Breckenridge, Texas, they tried out a variety of hauling equipment. But they found Internationals "the most efficient trucks for oil-field work" and decided to standardize on them. They are enthusiastic about the kind of performance and economy Internationals deliver under the most adverse conditions.

The experience of Chemical Process with International Trucks bears out what other oil men have learned —that Internationals are *engineered right* and *built right* to get loads through the world's toughest going. Investigate these trucks for your own business. See the nearby International dealer or Company-owned branch for information on this complete line, 42 models (including 12 with Diesel engines) in 142 wheelbase lengths, ranging from Half-Ton units to powerful Six-Wheelers.

INTERNATIONAL HARVESTER COMPANY
(Incorporated)
180 North Michigan Avenue Chicago, Illinois

INTERNATIONAL TRUCKS

has proved to be successful in the present experimental stage, although further improvements are being planned.

Company engineers are now conducting experiments on the water in an effort to coagulate the precipitate in order that more will be separated by settling, thus lightening the load on the filter.

Plant Details

The location of the Sun project provides ideal facilities for a gravity flow of salt water from the gun barrel to the bottom of the injection well. The salt water produced in wells on the lease is stored in two gun barrels, installed on the side of a hill.

From the two gun barrels, the salt water passes through two baffle towers for initial aeration, thence down flumes to the first of four large redwood tanks, located down the side of the hill. The flumes, as shown in Figure 1, are set in stepped sections providing further contact with air as the water falls to each successively lower section.

From the first, or receiving tank, the water passes through a take-off near the top, through transite pipe to the center of the bottom of No. 2 tank, the first settling tank. From there it is deflected upward at an angle to pass through openings in the decking, arranged around the circumference of the tank at the top. It then flows above the decking, to the center again. where it leaves the tank for No. 3, which is identical. The decking, which extends across the tank at the top causes the water to flow slowly from the center of the bottom to the outside edges at the top, furnishing a large dead space on bottom for settling.

After settling further in tank No. 3, the salt water is stored in the fourth tank, from which it moves down hill to the well site. Near the injection well are located the filter, an elevated back-wash tank, and a second redwood tank used as a working and storage tank. After passing through a sand and gravel filter, the water is metered, and conducted to the well through a 3-inch duroline string which extends to the bottom of the cemented liner in the well. The well takes the salt water at a vacuum.

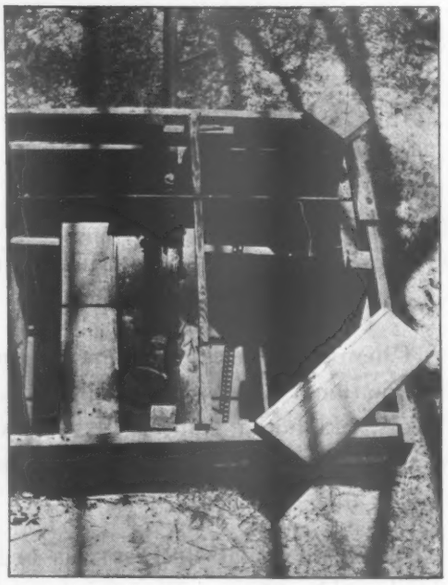
During the 45-day period in which experimentation was carried out, a total of 70,805 bbls. of salt water was returned to the Woodbine sand. A record of this run is shown graphically in Figure 2.

An investigation into the possible effect of this water input on the production of neighboring leases, showed that no increase was evident in water production attributable to the injection in the outpost well. The absence of channeling or coning of the salt water is due to the presence of extensive shale breaks above the injection point, which is 68 feet below the top of the sand, and an even greater distance below the oil-water contact in that section of the field. The fact that horizontal permeability is greater than vertical permeability also tends to prevent direct movement of the returned salt water to the bottoms of oil producing wells in the vicinity. In comparison with the large water drive in the sand, due to withdrawals to the east, the effect of the small amount injected on the west edge is not noticeable.

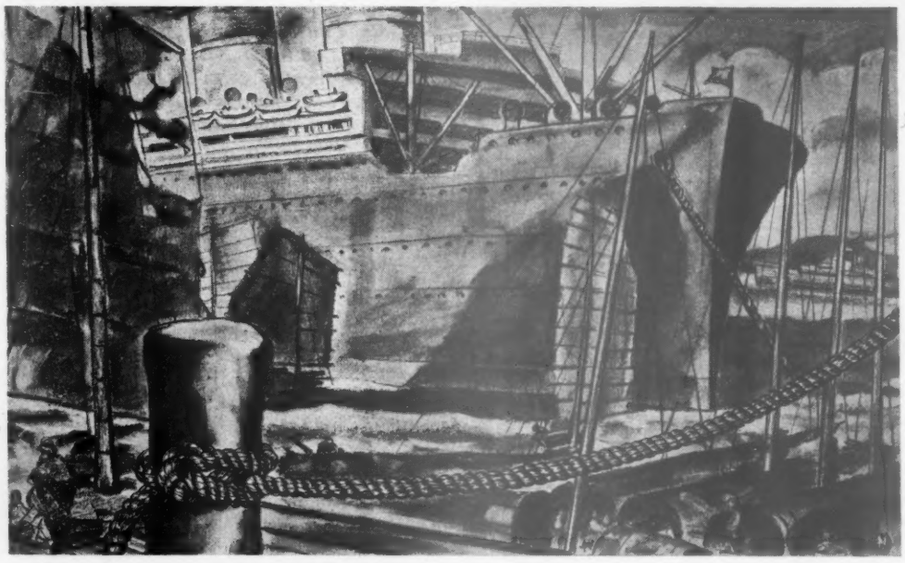
The end of the 45-day injection period shows the well taking water with no indication of build-up on the sand face due to the caking of insoluble materials. Laboratory tests during the run showed the removal of iron compounds, from 20 parts per million, to 0.3 parts per million.

Extension For Master Gate Control In River Bottom Land

Buried several feet below ground so as to provide ample clearance for eventual pumping equipment, the master gates on a number of river bottom wells caused lease switchers in parts of the East Texas field considerable trouble. Access to the pits which house the valves was by ladder.



One switcher procured short shafts, made of seven-eighths inch sucker-rod, and affixed a small sprocket to the shaft and another to the stem of the master gate. The two sprockets were connected with a suitable length of ordinary agricultural flat link chain and the upper or lay shaft carried in bearings improvised from the oak planking of the well-head pit.



SAILORS THE WORLD OVER PUT THEIR FAITH IN THE BOWLINE KNOT

Oil men consider the First National's 43 years of progressive banking service to the Southwest, and the pioneering experience that began with the first discovery of oil in the Mid Continent, essentials that immediately recommend this Bank as the logical source for all forms of OIL FINANCING.

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OPERATING IDEAS

Covers Protect Gate Wheels

Short sections of 6-inch pipe closed on one end with sheet steel welded in place are used by one East Texas operator to cover valve wheels and prevent any tampering with the well connections. The protectors are made large enough to slip over the valve wheels. Chains are attached to the ears on the side of the guards and they are locked to the well head thus preventing theft of the valve wheels which causes annoyance

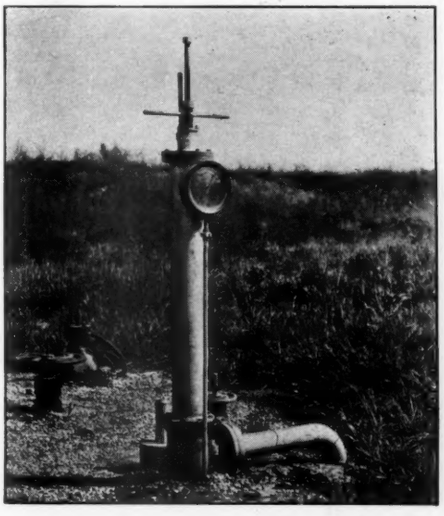
Elevator Bumping Block

Residents in the neighborhood of town-lot drilling sometimes wish there was a law to make drilling crews install a sound deadener on the elevators. Bouncing of the drill stem causes the elevator links to hit the swivel bowl continuously; when the drilling is rough the clink of metal striking metal can be heard at a greater distance than any other drilling sound. The crew on this rig, drilling in the Centralia townsite, has installed a 3- by 6-inch oak bumping block on the swivel to eliminate the noise and save wear and weakening of the elevators and links due to pounding during drilling.

Hydraulic Operation of Control Valves and Blowout Preventer

A drilling contractor, drilling a deep test, southwest of the Chickasha gas field, operates the master gate and blow-out preventer by hydraulic pressure. A small reciprocating pump driven by electric power builds up the pressure. Two oil barrels welded together serve as the volume tank. A pressure of 400 pounds can be quickly built up by this pump.

Pipe Line Relief Valve



A major pipe line company has taken advantage of the safeguard against breakage which is offered by a relief valve, placed on the main line near a station. When the pressure rises above what is considered safe, oil is diverted from the main line into a tank. A relief valve, used in this way, protects the line at times when a valve at the station is closed through error of an employe.

Service Line on Pumping Well

Some wells in the Oklahoma City field give quite a bit of trouble and the rods and tubing have to be pulled frequently. To save some time on this operation one company leaves the tubing line over the derrick, spooling the extra line on the reel shown in the lower right of the photograph. The free end of the line is securely fastened to the becket in the derrick corner to prevent it from getting loose.

Time Records Aid in Drilling Program

By HARRY SIMONS

Drilling time records kept by Pure Oil Co. on wells drilled in the Illinois basin have shortened operations and reduced costs. They have afforded a complete geological record of the holes drilled without the taking of a large number of cores. An incidental effect has been the saving in the number of bits per well and the number of trips. The method has been developed to the point where this company feels that cores are only necessary in unusual cases or when topping the pay formation.

The ledger system of filing the drilling time information and the paleontological correlation is used by the Pure Oil Co. This affords a very complete record which is concise and permanent and can be easily used for reference work. The drilling crews are required to keep the time required to drill each 2½ feet from 2,830 feet to completion of the well and at other intervals higher up where information is desired. The breaks, as indicated by the time records, are then checked by company geologists with the samples caught at 10-foot intervals to 2,850 and at 5-foot intervals from there to the total depth. The top and thickness of the formations are tabulated on the record sheets.

With the size of the task confronting them in mind, Pure's geological department set out to obtain as much information as possible early in the development of the basin fields. Extensive coring was done on most of the wells and accurate drilling time kept. With this information at hand the geological department felt it could more accurately determine the formation depths indicated by logging the samples. Accuracy of this method depends on the experience of the geologists at this type of work and the cooperation of the drilling crew in recording the drilling time, catching samples on the prescribed mark, and maintaining the mud at the specified weight and viscosity.

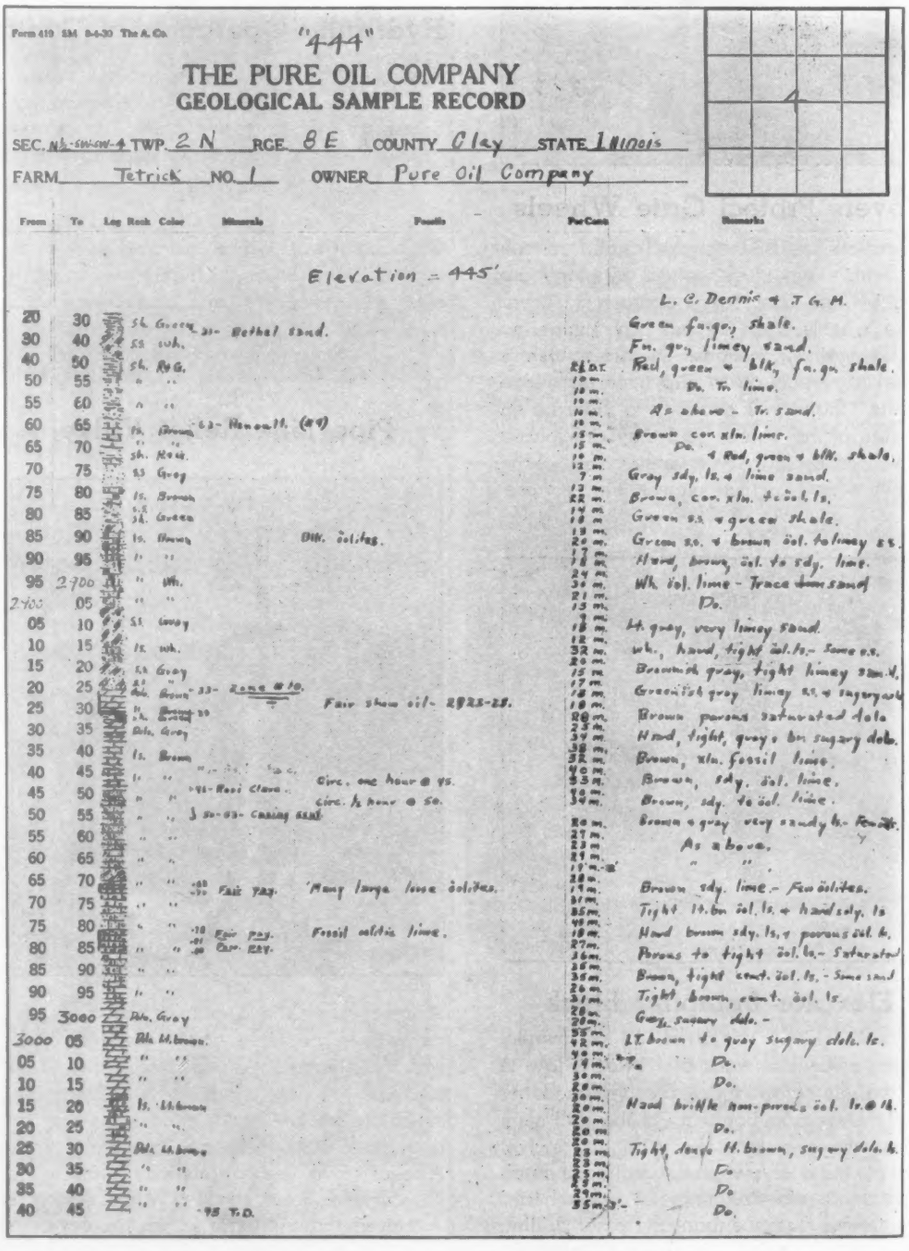
A lag of from 50 minutes to 1 hour is allowed when the hole is nearing completion depth. Due to cutting the casing seat before drilling into the pay, a rat-hole as long as 50 feet is not uncommon and sometimes the small hole is 100 feet long. Pure's geologists found that the time for cuttings to return to the surface was increased by the length of the rat-hole and that cuttings were always a considerably longer time coming from the rat-hole than from the regular hole; some feel that the turbulence set up by the shoulder where the hole is reduced is part of the cause for this increase in time.

The subsurface strata have been divided into 10 zones by Pure's geologists, with the keeping of time starting just above zone 9 which begins at the Renault limestone. Zone 10 starts with the lower O'Hara lime which is in the top of the Ste. Genevieve limestone.

Close attention is paid to the upper zones with a close check being made on the bottom of the Pottsville sand in the basal Pennsylvanian. The Chester series of the upper Mississippian is generally topped at around 2,000 feet, the Kineaid lime being the first member drilled in the Cisne field and the Menard lime being the first member encountered in the Noble area. The upper formations of the Chester are missing toward the eastern side of the basin due to subsurface formations dipping to the west and to the unconformity existing between the Pennsylvanian and the Mississipian.

The Glen Dean limestone, found at approximately 2,400 feet, has been selected as the best marker for correlative purposes due to its being continuous throughout the basin. It is an easily identified oolitic lime and later maps are contoured on it. The Cypress sand is generally 200 feet below the Glen Dean and top of the Ste. Genevieve is found at about 500 feet below the Glen Dean.

One of the interesting side lights of Pure's method of geological correlation has been the interest it created among drillers and tool-pushers. Ordinarily such tasks are performed with some reluctance and in a half-hearted manner by drilling crews as they generally do not see where it is any advantage to them. However, drillers soon learned that there was some information to be gleaned which would be useful to them and they not only have kept these records in excellent shape but have studied them carefully. By the information secured from previous wells, drillers are able to estimate the thickness of formations through which they are drilling. By checking the time record they can tell how near they are to being through a certain hard formation and whether it would be profitable to leave the bit in the hole or make a trip to replace it. This frequently has not only permitted the driller to increase his footage per tour but has eliminated a trip and saved the contractor the cost of a bit. Pure's geologists have been very helpful in this matter by giving the drillers enough information to enable them to make a rough correlation.



Form 419 SM 8-6-30 The A. Co.

"444"

THE PURE OIL COMPANY
GEOLOGICAL SAMPLE RECORD

SEC. N½-SW-SW-4 TWP. 2N RGE. 8E COUNTY Clay STATE Illinois

FARM Tetrick NO. 1 OWNER Pure Oil Company

Elevation = 445'

From	To	Lag	Rock	Color	Minerals	Fossils	Per Cent	Remarks
								L. C. Dennis & J. G. M.
20	30		Sh.	Green	25- Bethel sand.			Green fo.gr. shale.
30	40		Ss.	wh.				Fn. gr., limey sand.
40	50		Sh.	Red.				Red, green & blk, fo.gr. shale.
50	55		"	"				Do. To lime.
55	60		"	"				As above - Tr. sand.
60	65		Ls.	Brown	63- Renault. (#9)			Brown con. xln. lime.
65	70		"	"				Do. & Red, green & blk. shale.
70	75		Sh.	Red.				Gray sdy. ls. & lime sand.
75	80		Ss.	Grey				Brown, con. xln. to ool. ls.
80	85		Ls.	Brown				Green ss. & green shale.
85	90		Sh.	Green				Green ss. & brown ool. to limey ss.
90	95		Ls.	Brown	Oolites.			Hard, brown, ool. to sdy. lime.
95	2700		"	"				Wh. ool. lime - Trace brn sand
2700	05		"	Wh.				Do.
05	10		"	"				
10	15		Ss.	Gray				Lt. gray, very limey sand.
15	20		Ls.	wh.				wh., hard, tight ool. ls. - Some o.s.
20	25		Ss.	Grey				Brownish gray, tight limey sd. &
25	30		Ls.	Brown	33- Zone #10.	Fair show oil- 2923-28.		Greenish gray limey ss. & sugary
30	35		Dolo.	Brown				Brown porous saturated dolo
35	40		Dolo.	Grey				Hard, tight, gray & bn sugary dolo.
40	45		Ls.	Brown				Brown, xln. fossil lime.
45	50		"	"	48- Rosi Clave.	Circ. one hour @ 45.		Brown, sdy. ool. lime.
50	55		"	"	53- 53- Casing seat	Circ. ½ hour @ 50.		Brown, sdy. to ool. lime.
55	60		"	"				Brown & gray very sandy ls. Fo.
60	65		"	"				As above.
65	70		"	"	68 Fair 723	Many large lime oolites.		"
70	75		"	"				Brown sdy. lime - Fo. oolites.
75	80		"	"	78 Fair 723	Fossil oolitic lime.		Tight lt. bn ool. ls. & hard sdy. ls
80	85		"	"	81 Fair 723			Hard brown sdy. ls. & porous ool. ls.
85	90		"	"				Porous to tight ool. ls. - Saturated
90	95		"	"				Brown, tight cont. ool. ls. - Some sand
95	3000		Dolo.	Grey				Tight, brown, cont. ool. ls.
3000	05		Dolo.	Lt. brown				Gray, sugary dolo. -
05	10		"	"				Lt. brown to gray sugary dolo. ls.
10	15		"	"				Do.
15	20		Ls.	Lt. brown				Do.
20	25		"	"				Hard brittle non-porous ool. ls. @ 18.
25	30		Dolo.	Lt. brown				Do.
30	35		"	"				Tight, dense lt. brown, sugary dolo. ls.
35	40		"	"				Do
40	45		"	"	98 T.D.			Do
								Do.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Mineral Spirits or Petroleum Paint Thinner

Is the product "mineral spirits" derived from petroleum or is it a coal tar product? Is it a definite liquid recognized in the trade by fixed properties?—T. C. D.

Mineral spirits, also known as petroleum spirits and white spirits, is a purified petroleum distillate. This is defined by the American Society for Testing Materials as: A refined petroleum distillate with a minimum flashpoint of 70° F. determined by the Tag closed tester in accordance with the standard method of test for flashpoint by means of the Tag closed tester, or by the Abel tester, with volatility and other properties making it suitable as a thinner and solvent in paints, varnishes and similar products.

Note: The term "turpentine substitute" as applied to petroleum spirits is to be condemned as false and misleading. The term "mineral spirits," which is frequently used in the paint and varnish industry, is a misnomer, as it includes within its scope not only petroleum products but other hydrocarbon mixtures, such as coal-tar distillates. In Great Britain the term "petroleum spirits" is applied to a very light hydrocarbon mixture having a flashpoint below 32° F. (0° C.).

The U. S. Government has a specification intended to govern the purity of this product, issued in the Federal Standard Stock Catalog under "Volatile Mineral Spirits Paint Thinner," of which the following is a summary.

This specification applies to petroleum distillates used for thinning paints.

Color: Not darker than 21 Saybolt.

Spot test: Five drops on filter paper shall evaporate completely, with no oily spot, after 30 minutes.

Flashpoint: Not lower than 86° F., closed cup.

Blackening: Shall not blacken clean copper strip when immersed at the boiling point for 30 minutes.

Distillation: Distillate obtained below 266° F. shall not exceed 5 per cent and the recovery not less than 97 per cent at 466° F.

Acidity: The residue after distillation shall be neutral.

Reference: Thinner; Paint, Volatile Mineral Spirits, Federal Standard Stock Catalog, TT-T-291.

Treatment of Boiler Feed Waters With Phosphates

I wish to know about the use of phosphates in boilers operating at 150 pounds to guard against caustic embrittlement. What is the practice regarding maintaining "a certain phosphate excess"? Is either mono-, di- or tri-sodium phosphate used in maintaining phosphate excess?—R. L. G.

Concerning the use of phosphates in boiler treatment, the exact quantity will be governed by the condition of the water which you will of course have to determine by the chemical analysis. The mono-, di- or tri-sodium phosphates are used. It may be that the following suggestions will be of value.

Soda ash is converted to caustic soda in high-pressure boilers, often resulting in caustic embrittlement, because of the tendency to always maintain the soda ash content at the maximum to prevent sulfate scale. Phosphates are used because they will first react to reduce sulfate hardness and will then react with other calcium compounds. All calcium hardness will be removed before any free soluble phosphate can exist in the water. Soda ash reacts only to reduce sulfate hardness.

Blanning and Rich make use of the formula below for phosphate treatment used as a secondary treatment after lime or caustic soda has been introduced internally for removing temporary hardness.

Disodium phosphate, $Na_2HPO_4.12H_2$ represented by W., required per 1,000 gallons of water. Alkaline water:

$$W = \frac{H - M}{1.9}$$

Acid water:

$$W = \frac{H - A}{1.9}$$

If the anhydrous disodium phosphate, Na_2HPO_4 is used, multiply W determined above by 0.408 to find W required.

Trisodium phosphate, $Na_3PO_4.12H_2O$. Alkaline water:

$$W = \frac{H - M}{2.8}$$

Acid water:

$$W = \frac{H - A}{1.9}$$

The letters used in these formulas are: H—total hardness; M—methyl orange alkalinity; A—acidity; W—weight of chemical required per 1,000 gallons of water. The equivalents are stated in terms of calcium carbonate.

The three phosphates mono, di, and tri, are each suitable for water treating. The crystalline forms and anhydrous may be used in equivalent quantities, readily calculated from the molecular formulas.

Reference: Blanning and Rich, Boiler Feed and Boiler Water Softening.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Aluminum Stearate

Use—Depressing pourpoint, lubricating oil compositions, greases.

Form — White to yellowish amorphous powder.

Formula—$Al(C_{17}H_{35}CO_2)_3$.

Molecular weight—876.

LIMITATIONS

	Per cent
Moisture, max.	1.5
Water soluble, max.	2.0
Residue insoluble in water, min.	6.0

Note: As marketed varies in composition; for example, alumina and iron oxides vary from 4.5 to 9.5 per cent.

Microcrystalline Hydrocarbons and Oil in Petrolatum

What is petroleum jelly? Are there any standard specifications covering this material?—M. G. S.

Petroleum jelly is one of the trade names for the unctuous salve-like substance known as petrolatum, which is a mixture of the solid microcrystalline hydrocarbons and lubricating oil. This substance is often described as amorphous paraffin wax but investigations of the product, as obtained from both crude oil and the lubricating fractions, have revealed the paraffin wax is present in the crystalline state. When examined under the microscope differences in crystalline structure are observed. These depend upon the quantity and viscosity of the oil present.

It is well known that the wax may be separated in a crystalline state only after distillation of the crude oil and the condition is improved at the higher temperatures of distillation. Sava discovered that paraffin wax was obtained more readily and in greater abundance the higher the superheating of the steam employed in the distillation. He concluded that high temperature favors the conversion of the extremely minute crystals of the "amorphous" hydrocarbons into larger forms of readily recognized crystalline structure. The high temperature causes the decomposition of the viscous oils, which hinder crystallization.

There are no standard specifications for petrolatum; however, the product is commonly marketed according to color, which may vary from green to snow white, and melting point, varying from approximately 95° to 105° F.

References: Gurwitsch-Moore, Petroleum Technology, pages 327 and 552.
Sava, Rev. Petr., 1911, page 56.

Iron Carbonyl Not Extensively Used as Knock Inhibitor

How extensively is ferro carbonyl being used for the improvement of octane number of gasoline? Does it produce any harmful effects on the automobile engine in which gasoline treated with it is used? Is the chemical such that precautionary measures have to be used when handling it?—H. A. S.

Some motor fuel, which has been treated with iron carbonyl, is marketed in Germany under the trade name Motalin. The compound is a yellowish red heavy liquid, having a specific gravity 1.45. It melts at 6° F. and has a boiling point of 218° F. Iron carbonyl is soluble in petroleum liquids. It is not hazardous to handle.

There is no extensive use of gasoline containing this material because of the objectionable deposits of iron oxide which form on the spark plugs and valves.

Additional objectionable properties include instability to light; the sun rays cause decomposition, resulting in separation of yellow crystals so it is necessary to keep the liquid in the dark. It is a relatively weak knock inhibitor, having about half the effectiveness of Ethyl lead.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired, postage should be included.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Desalting Crude Petroleum

What are the various methods used in the oil fields to remove excess chloride salts of calcium, magnesium and sodium from crude oil? What is there in the literature on this subject?—E. E. T.

The questions you ask are well answered in a recently released publication by the U. S. Bureau of Mines entitled "Desalting Crude Petroleum.—A Review of the Literature," prepared by L. F. Christianson and Joseph W. Horne and issued as R. I. 3422. Copies of the report may be secured from the U. S. Bureau of Mines, Washington, D. C.

The most important economic and efficient methods of removing these salts from emulsified oil are classified as electrical, simple washing and settling, heat and pressure, chemical, contact with a solid and centrifugal processes. The choice of method depends upon many things and the report referred to gives a rather complete review of these methods and their adaptibility and in the back of the report there are several pages devoted to a bibliography of the literature on this subject.

The presence of salt in crude petroleum has been known for many years, but recently the percentages of chloride salts of calcium, magnesium and sodium produced with some crude oils has increased to such an extent that the removal of the salty compounds is imperative for some refiners and their presence causes considerable apprehension for others. The exact reason for this increase of salts is not definitely known, but in all probability a combination of factors contributes to the condition. The most important are acidizing of wells, development of new fields producing crude oils of greater salt content, and the depletion of old fields with an attending increase in the production of emulsified brine.

Frequently the salt is dissolved in water emulsified with the oil, but it sometimes exists in crystalline form dispersed throughout the oil. Any satisfactory desalting process must be economical and efficient, and the method employed depends largely on the physical character of the salt in the crude.

The use of hydrochloric acid for increasing production of limestone wells reacts with the producing formation to give water-soluble chloride salts mainly of magnesium, calcium and sodium. The salts found in crude petroleum vary with respect to their quantities and relative proportions. Sodium chloride usually predominates, but calcium and magnesium chloride are present in appreciable quantities, particularly in petroleum produced from wells that have been acid-treated.

The other two contributing causes for the increase of salts in crude oils are the development of new oil fields producing oils containing greater concentrations of salt, and the depleting of old fields generally accompanied by an increase in production of salt-water emulsions.

At present, the desalting problem is considered mainly for the refiner. However, in addition to water, the salt contained in the petroleum delivered to the transportation companies in the United States amounts to millions of pounds per year. The handling of this great volume of salt and water by pipe line, tanker or tankear presents a problem of considerable economic magnitude in addition to the expense resulting from the continuous corrosion and erosion of the equipment caused by the salt and water.

Whether the salt and water should be removed from the oil in the field or at the refinery depends on several factors, such as company organization, the relation of the producer to the refiner, the availability of material and of labor for the operation of desalting units, and the location of the refinery with respect to the field of production. In some areas these factors make the removal of salt a process for the refiner. The physical and chemical properties of the emulsion and the salts contained in crude petroleum indicate the removal of salt and water can be best done in the field. When dealing with a salty oil, it is difficult at times to differentiate between emulsion breaking and desalting because any coalescence and settling of the brine droplets removes salt. At present most of the treatment for desalting is done at the refinery, and a resume of some of the processes follows.

There are several electrical processes in use and while they differ materially in their mechanical operation they all have much the same fundamental basis. With an electro-static induction, produced by an electric field of high potential, the dispersed droplets in a crude oil and brine emulsion assume positive and negative charges. The mutual attraction between unlike charges on adjacent droplets is of sufficient force to cause coalescence.

This electrical process depends upon the following two steps:

1. Emulsification of the salty crude oil with added water, where the oil or water, or both, are preheated usually to 140 to 190° F. The quantity of added wash water ranges from 5 to 50 per cent by volume of the oil to be washed.

2. The crude oil and water emulsion is kept at a temperature of 130 to 200° F., and the water and salt are separated by an electric field contained in a vessel that is maintained at a pressure, usually, of 15 to 35 pounds per square inch.

The removal of salt from crude petroleum by the process of washing with water at atmospheric temperatures and then allowing the two liquids to separate by natural gravitational settling has proved satisfactory only in those cases where the original crude oil does not tend to form a stable emulsion and is a comparatively light oil with a low viscosity. At best, this process, without modification, gives a low salt-removal efficiency, but fundamentally most of the present commonly used processes are based on this method.

Experimental work on a Mid-Continent oil that formed an emulsion with water as the internal phase, found washing of the oil through water is preferable to washing the water through oil.

Heat decreases the viscosity of the oil and increases the difference in specific gravity between the oil and water. It also tends to expand slightly the minute droplets of water, decreasing the surface energy of the tenacious oil film that envelops each droplet and thus causing the film to burst and the water to coalesce. By the addition of heat, the quantity of water necessary to remove a definite percentage of salt may be decreased, thus, the salt content of the treated oil is decreased when the amount of either heat or water is increased.

Pressure has little, if any, effect on the breaking of emulsions, but when heat is applied to a system, the pressure of the system must be increased above the vapor pressure of water at the operating temperature. Provision also must be made to prevent loss of light fractions from the charged oil. This may be done by maintaining sufficient pressure on the settling drum to prevent vaporization, at high temperature this is impracticable); or by treating a previously topped crude oil; or by installing a vaporizing dome on the settling drum connected to a fractionating tower.

The mixing of water with the salty crude oil to form a secondary emulsion usually is the first step towards the desalting of petroleum. In many commercial desalting plants, chemicals are added to aid in resolving the emulsions and thus produce faster and better settling. Chemicals have long been used for demulsification. Chemicals have been separated into six groups according to their effect on the enveloping films that surround the dispersed globules in the emulsion. Some compounds have a dual action and will appear in more than one group.

Group 1 consists of chemicals with a strong tendency to take up water. Group 2 consists of compounds that cause flocculation by combining with the emulsifying agent contained in the protective film. Group 3 is made up of compounds that react with salts in the water or with organic acids that may be present. Group 4 compounds consist of chemicals that break the films enveloping the globules by their tendency to form opposite type emulsions. Group 5 is composed of electrolytes that tend to neutralize the electrical charge on the surface of the emulsified water. Group 6 consists of solvents that dissolve the material making up the protective film.

The resolving of an emulsion by its contact with a solid involves many physicochemical properties such as surface tension, interfacial tension, interfacial contact angles, and adhesion tension. The relationship of these properties to emulsions has been discussed extensively in the literature.

The solid contact processes are based upon the use of solid material such as diatomaceous earth; clay or marble; infusorial earth or cloth; calcined infusorial earth; bentonites, or porous magnesium silicate; silica gel, limonite, hematite, lepidolite or horn-blends. These solids may contact the emulsion by being mixed with the emulsified oil (stirring) or by acting as a filtering medium through which the oil passes (filtering). A combination of these two methods sometimes is used where one substance is mixed with the oil to act as a filter-aid and where the mixture is filtered through the porous layer of another substance.

Most emulsions of water in oil and oil in water can be separated from the continuous medium by the proper centrifugal treatment. Centrifuging is an outgrowth of gravity separation, and the chief factors to be considered are the viscosity of the continuous medium and the difference in density between the dispersed phase and the continuous phase. Heat affects both of these factors to the advantage of better separation of an oil and water emulsion and also is helpful in permitting coalescence of the water globules. Heat decreases the viscosity and specific gravity of the oil and at the same time has relatively little effect on the viscosity and gravity of the water.

FIELD OPERATIONS

Summarizing the Week's Developments

KANSAS—Extension wells were completed in the Hall and Coralena pools in Russell County, the Wilkens pool in Ellsworth County, and the South Trapp pool in Barton County. A new producing horizon was uncovered in the Greenvale pool, Russell County. A 4,022-bbl. well was completed in the Zenith field, Stafford County, largest completion of the week. A small wildcat opened a new producing area in Section 34-27-7, Butler County. Two Barton County wildcats and one Harvey County outpost were showing oil and were near completion as pool openers.

OKLAHOMA—Western Osage County attracted attention when an outpost near Kaw City blew in for 7,000,000 feet of gas and sprayed an unestimated amount of oil. Testing was delayed when the tools were lost in the hole. Viola lime production was uncovered in the Tyrola pool, Seminole County, heretofore productive only from Hunton lime. The Washita County wildcat was drilling below 10,025 feet.

ILLINOIS—The main feature of the week in Illinois was that an average of 108,011 bbls. of crude oil per day was produced, which broke all records in that state. The new fields produced 97,085 bbls. per day and the old fields, which were curtailed somewhat, recorded a daily average of 10,026 bbls.

TEXAS—The south end of the K.M.A. field in North Texas was extended 1½ miles. A producing well of J. E. Mabee, between the Bennett and Wasson-Denver pools in the north end of the West Texas district, leads to the belief that the three pools are one field 14 miles in length. Six new wildcats are to start drilling soon in five counties of the central and southern part of the Permian basin. Production tests in wildcats in Haskell and Jones counties indicate two new pools. A gas field was opened in Laguna Madre Bay, offshore from Kleberg County, in Southwest Texas. The South Alice field in Jim Wells County was extended a mile. A wildcat northwest of Robstown, Nueces County, blew out, caught fire and cratered. It produced oil and gas. The hole bridged and the fire was extinguished, but it indicated the discovery of a new source of production. The deep sand area in the Sweden field was extended a mile south. Northeast of Houston in Harris County a new pool is in the making in the Frio sand.

LA-ARK-TEX—In the Louisiana coastal area Shell Petroleum Corp. appears to have opened a pool in St. Martin Parish. New operations and a near completion are reported from the Shreveport field, in North Louisiana, and added interest is being shown in the possibilities of Columbia County, Arkansas.

MICHIGAN—Van Buren County, with eight new wells out of a total of 17 oil completions in the state, continues to be the "hot spot" of Michigan development. One acidized well in the Freeman pool in Clare County produced 3,000 bbls. in 24 hours.

CALIFORNIA—The Standard Oil Co. of California issues a statement to all concerned that California is producing more oil than can be sold and that the industry cannot afford to add more petroleum to storage. "The financial burden is too heavy to carry," the statement adds.

Completions in All Fields

(Week Ending December 3, 1938)

	Oil	Gas	Dry	Total	1938 total comp. to date	1937 total comp. to date
N. Y., Pa., and W. Va.	36	8	4	48	3,270	4,351
Ohio	16	7	4	27	908	1,166
Indiana	0	0	0	0	121	107
Kentucky	7	0	4	11	824	670
Illinois	80	0	13	93	1,944	299
Michigan	17	0	6	23	874	760
Kansas	22	0	6	28	1,487	2,462
Oklahoma	18	7	9	34	1,575	2,467
Texas:						
North Central Texas	19	0	13	32	2,846	2,546
West Texas	29	1	8	38	1,814	2,489
Texas Panhandle	6	2	1	9	524	765
East Texas	28	0	0	28	1,648	2,244
East Central Texas	5	0	3	8	326	669
East Texas Border	2	0	0	2	125	310
Gulf Coast Texas	16	0	8	24	1,227	1,452
Southwest Texas	29	4	9	42	2,013	2,985
Total Texas	134	7	42	183	10,523	13,460
North Louisiana	4	6	0	10	585	622
Gulf Coast Louisiana	8	0	2	10	449	428
Total Louisiana	12	6	2	20	1,034	1,050
Arkansas	2	0	4	6	228	167
Montana	1	0	0	1	102	214
Wyoming	0	0	2	2	145	102
Colorado	0	0	0	0	13	18
New Mexico	11	0	2	13	519	656
Utah	0	0	0	0	3	4
California	14	0	5	19	1,182	1,398
Total United States	370	35	103	508	24,752	29,260
Total previous week	349	31	119	499		
Week ending Dec. 4, 1937	444	62	139	645		

Outstanding Fields--Highlights

(Week Ending December 3, 1938)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	19	39	5	3,113	876	15,090
Wasson-Bennett	7	29	3	5,820	183	11,500
Ector County	9	54	5	6,098	1,375	44,855
Winkler County	2	13	3	1,414	1,736	36,310
Howard-Glasscock	6	13	5	1,874	1,032	14,995
East Texas	20	36	28	1,489	25,860	371,135
OKLAHOMA						
St. Louis	4	27	7	1,771	730	27,000
Oklahoma City	3	7	0	0	1,085	77,550
KANSAS						
Barton County	5	17	3	904	388	8,925
Stafford County	5	17	4	985	210	4,622
Rice County	3	16	5	2,795	1,246	27,875
Russell County	4	20	3	2,303	1,169	21,295
NEW MEXICO						
Lea County	9	85	10	1,575	1,940	98,720
LA-ARK-TEX						
Rodessa, La-Ark-Tex	3	10	2	815	1,047	64,000
Cotton Valley, La. (deep)	2	18	1	395	100	10,220
Schuler, Ark.	1	22	0	0	122	16,535
Jennings, La.	2	16	1	50	126	24,212
MICHIGAN						
Freeman	2	30	4	6,862	38	8,481
ILLINOIS						
Central Illinois	63	439	80	19,615	1,831	97,985
CALIFORNIA						
Wilmington	6	13	0	0	583	95,250
KENTUCKY						
Birk City	3	10	3	590	101	3,980

Proved Performers in the Oil Country

FAIRBANKS-MORSE Centrifugal Pumps

Fig. 5510—A sturdy, inexpensive side-suction centrifugal pump for either belt or direct-driven installations. An efficient design in a low-price pump.

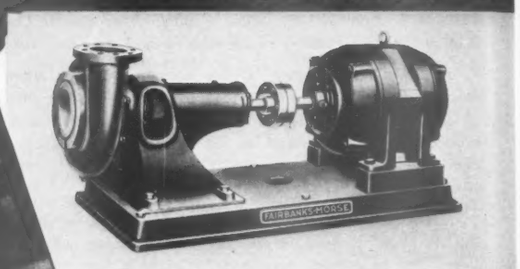


Fig. 5530—Ball-bearing design, rigid frame construction and special type packing seal are unusual features of this pump. F-M volume production makes possible a moderate price.

Fig. 5550—A Builtogether unit with pump and splashproof motor built on one shaft. Undivided responsibility with one guarantee is your assurance of satisfactory operation.

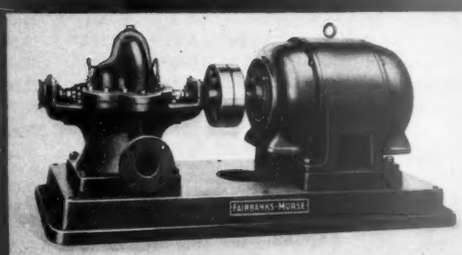


Fig. 5813—A centrifugal pump with split case design permitting entire rotary element with sealed ball-bearings to be easily removed. Features low maintenance and repair costs.

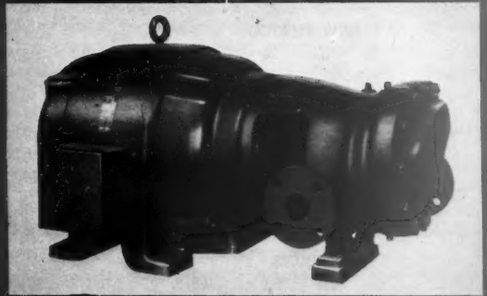


Fig. 5592—Builtogether design, two stage. Bronze fitted. Splashproof motor, ball bearings. Suitable for heads up to 600 feet.

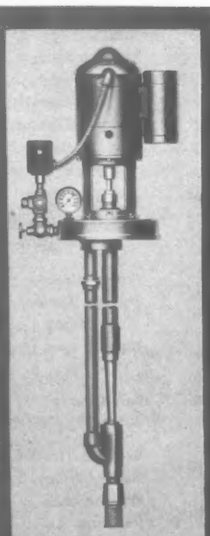


Fig. 6640—Centrifugal ejector pump features simple design and low maintenance costs. Suited for either deep or shallow wells and may be connected to a pressure system.

Fairbanks-Morse Centrifugal pumps are adaptable to any type of oil country service. Built in a wide range of sizes and pressures, they offer uniformly dependable and highly efficient operation.

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CONTINENTAL

Illinois and Kentucky

By STAFF CORRESPONDENT

108,011 Bbls. Daily a New Illinois Production Record

MATTOON, Ill., Dec. 5.—Ninety-three wells were completed in Illinois fields in the past week of which 80 were oil wells and 13 dry holes. The oil wells totaled 19,615 bbls. in initial production, an average of 245 bbls. per well. The largest well of the week was a McClosky lime completion in Marion County which started at 1,800 bbls. per day. The new operations including locations, rigs and wells drilling were only one short of the completions.

Thirty-four oil wells were completed in the Salem field in Marion County, with no dry holes. In Centralia one oil well and one dry hole were completed, while in the Patoka district a dry hole was the only completion.

Illinois Fields

HIGHLIGHTS OF THE WEEK: An 1,800-bbl. well from McClosky lime in the Salem field in Marion County was the largest of the 80 wells completed during the week. All production records in Illinois were broken in the past week.

Daily production of new pools 97,985 bbls.; old pools, 10,026 bbls.; total 108,011 bbls.

Completed oil wells, 80; operations, including locations, rigs and wells drilling, 573. (A number of locations previously included have been abandoned.)

Altogether Marion County's record included 35 oil wells with 9,383 bbls. initial production, and two dry holes.

In Fayette County a 125-bbl. well was completed in the new St. James field but 36 new oil wells with 7,009 bbls. initial production and no dry holes, were recorded. Two wildcat dry holes brought the total to 37 oil wells, 7,134 bbls. initial production and two dry holes.

In Clay County a 332-bbl. well was finished in the Cisne pool and two oil wells with 946 bbls. initial production were finished in the Clay City pool giving the county a total of three oil wells, 1,278 bbls. initial production and no dry holes.

Wayne County shows four oil wells in the North Aden pool, with initial of 907 bbls. Two wells in Jefferson County, starting at 457 bbls. a day and a 35-bbl. well in Lawrence County, completed the list of new oil wells. Dry holes were completed in Shelby, Clark, Edgar, Fulton and Brown counties, one each, and in Clinton County, two.

Following are the completions in all fields. The initial production represents 24 hours unless otherwise stated:

Marion County Completions

In the Lake Centralia-Salem field in Marion County, the largest well of the week was W. S. Tatums No. 5 English, C S half NE SE Section 7-1n-2e, which had McClosky lime pay at 1,988-2,002 feet, total depth. It was acidized with 6,000 gallons and flowed 1,800 bbls in 24 hours. J. J. Deaner No. 3 Burg, SE NW NE Section 18-1n-2e, McClosky at 2,100 feet, total depth 2,197 feet, pumped 20 bbls. of oil and 40 bbls. of water. Texas Co. No. 1 Branch Cemetery, NE NW NW Section 4-1n-2e, Benoist sand at 1,778 feet, total depth 1,802 feet, temporarily abandoned. W. R. Curry, No. 2 Hawthorne, NW cor. SW SE Section 5-1n-2e, Benoist at 1,743-65 feet, total depth, flowed 250 bbls. W. C. McBride, Inc., No. 1 Fyke Heirs, SW cor. NW SE Section 5-1n-2e, Benoist at 1,749-85 feet, total depth, pumped 159 bbls. Roberts Brothers No. 2 Pittenger, SE NE NE Section 5-1n-2e, Benoist at 1,754-1,801 feet, total depth, flowed 300 bbls. Roberts Brothers No. 3 Pittenger, NW cor. SE NE NE Section 5-1n-2e, McClosky lime at 1,891-98 feet, total depth, flowed 300 bbls. Texas Co. No. 1 E. Johnson, SW cor. NE Section 5-1n-2e, Benoist at 1,713-68 feet, total depth, flowed 96 bbls. through oue-quarter inch choke. Texas Co. No. 2 J. Richardson, SE SE NW Section 5-1n-2e, Benoist at 1,692-1,745 feet, total depth flowed 560 bbls. Texas Co. No. 2 H. Small, NW NE NE Section 5-1n-2e, Benoist at 1,756-1,801 feet, total depth, flowed an estimated 700 bbls. Texas Co. No. 2 G. Johnson, SE SE NE Section 7-1n-2e, Benoist at 1,744-83 feet, total depth, flowed 175 bbls. through 39/64-inch choke. Mammoth Producing & Refining Co. No. 4 Seibel, SW SE SE Section 8-1n-2e, McClosky at 2,100-16 feet, total depth 2,116½ feet, flowed an estimated 250 bbls. Texas Co. No. 3 W. Carr, SE SW NW Section 8-1n-2e, Benoist at 1,778-1,806 feet, total depth, flowed 200 bbls. Mammoth No. 7 Bachman, C N half SE SW Section 9-1n-2e, McClosky pay at 2,100-02½ feet and 2,112-18 feet, total depth 2,139 feet, pumped 12 bbls.

In the Salem area in Marion County, Magnolia Petroleum Co. No. 6 W. O. Chitwood, NE NW SW Section 16-2n-2e, Benoist sand at 1,863-92 feet, total depth 1,911 feet, flowed 240 bbls. Texas Co. No. 1 W. Martin, SE SE SE Section 17-2n-2e, Benoist sand at 1,795-1,828 feet, flowed 141 bbls. through 1-inch choke. Kingwood Oil Co. and Bell No. 8 Shanafelt, Benoist top at 1,766 feet, Renault at 1,803 feet, total depth 1,804 feet, flowed 45 bbls. in 1 hour and 45 minutes. Shell Petroleum Corp. No. 5 Salem State Bank, SW SW SE Section 20-2n-2e, Benoist at 1,736-89 feet, total depth, flowed 192 bbls. Texas Co. No. 3 N. Young, NW SE NE Section 20-2n-2e, Benoist at 1,745-83 feet, total depth, flowed 330 bbls. Lad Oil Co. No. 2 Grand Prairie Church, SW cor. NW Section 21-2n-2e, Benoist at 1,768-1,829 feet, McClosky lime at 1,971-98 feet, total depth 1,999 feet, plugged back to 1,829 feet and the

(Continued on Page 89)

Tax Reports Show Decline in Daviess County Production

OWENSBORO, Ky., Dec. 5.—According to the tax reports in the county clerk's office in Owensboro production in Daviess County fell off about 13,000 bbls. in October compared to the September output. October production was 70,519 bbls. or an average of 2,275 bbls. per day while September production was 83,528 bbls. or an average of 2,784 bbls. per day. October's production was valued at $80,396.92, an average of $1.14 per barrel., while September production was valued at $105,212 or an average of $1.26 per barrel. Production in July was 34,376 bbls. for the month and in August 54,396 bbls.

Completions in Birk City in the past week were few and the production below past averages. On the Daviess County side Major Oil Co. No. 1 Mrs. Carrie Long started at 200 bbls. per day from McClosky pay, total depth 1,896 feet; Aetna Oil Service Corp. No. 1 Henry Miller was good for 180 bbls. at a total depth of 1,919 feet and W. E. Hupp and Snowden & McSweeney No. 8 Mrs. L. Taylor was a 210-bbl. well at a total depth of 1,893½ feet. On the Henderson County side of the field the only completion was a dry hole of W. E. Hupp on the Harry Hines land. It was drilled to 2,089 feet. One new operation was reported on the Daviess County side and one in the Henderson County end of the field.

Town lot drilling in Spottsville, Henderson County, has been started by Railston & Sails of Evansville, Ind., who have a derrick up on the Stewart property. Magnolia Petroleum Co.'s test on the J. W. Isbell land was near completion. The Magnolia Petroleum Co.'s test on the Neal farm cored 3 feet of saturation in the McClosky lime and the well may make about a 50-bbl. producer. Magnolia's test on the W. H. Negley tract, also in the Spottsville area found McClosky lime very hard and with little oil showing, but a shot with nitroglycerin and a treatment with acid, it was hoped, would develop a commercial well.

Following will be found the completions in other areas in Western Kentucky and new operations:

Butler County, South Hill district: W. R. Jackson and others No. 1 L. Holman, 2-bbl. well in Jones sand, total depth 739 feet.

Christian County, Bluff Springs district: F. C. Thomas and others No. 1 Meacham, an old well drilled in 1920 by Dixie Oil Co., will be cleaned out and acidized. Total depth is 2,300 feet.

Daviess County: Utica district: H. C. Farmer and others No. 1 Jim Brown, spudding in. Birk City district: Snowden & McSweeney No. 3 Helen B. Fisher, rigging up; Major Oil Co. No. 4 Mirilda Wahl, building rig. Owensboro district: Fred J. Hildt and others No. 1 Don Moore, spudding in. Knottsville district: Joe Lang and others No. 1 John Reynolds, a dry hole, total depth 1,200 feet.

Hancock County, Patesville district: Roy Beard No. 1 C. A. Johnson, 10-bbl. well in Bethel sand, total depth 487 feet. Easton district: James C. Ellis No. 10 Hallie Mason, rigging up.

Henderson County, Reed district: Spring Rose Drilling Co. and others No. 1 Barr & Heppler, rigging up. Spottsville district: M. T. Grubbs and others No. 1 Tyro Cooksey, rigging up; Railston & Sails No. 1 Annie Stewart (Spottsville Ferry Lot), spudding in. Euterpe district: Imperial Oil & Gas Products Co. No. 8 Mrs. S. A. Freeman, drilling at 1,100 feet.

McLean County, Cleopatra district: Fred J. Hildt and others No. 1 Nannie Gibson, spudding in. South Livermore district: Marhill Oil & Gas Co. No. 2 Hollis Howell, drilling at 635 feet; J. D. Reynolds and others No. 5 Hollis Howell, 25-bbl. well in Jett sand, total depth 1,144 feet.

Muhlenburg County, Rochester district: H. C. Darby and others No. 1 Smith, drilling at 425 feet.

Ohio County, Narrows district: McLaughlin and others No. 3 T. P. Fentress, 5-bbl. well in Barlow sand, total depth 484 feet. Oklahoma district: Joe May and others No. 1 Gerald Howard, dry hole, total depth 600 feet.

Webster County, Sebree district: Sebree Oil Co. No. 1 J. R. Ramsey, an old well drilled deeper from 1,086 feet was abandoned at 1,454 feet.

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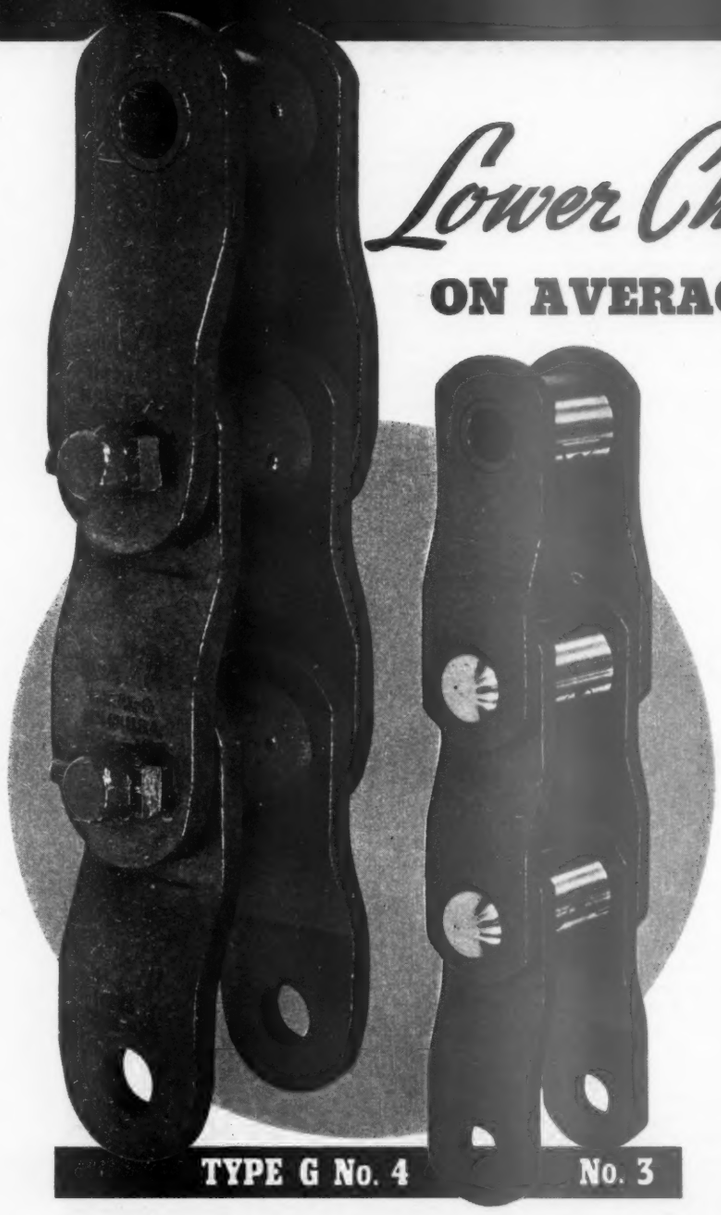

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California Field Report

By L. P. STOCKMAN

Largest Crude Buyer Warns of Overproduction Dangers

LOS ANGELES, Calif., Dec. 5.—California is rapidly approaching another crisis due to chronic overproduction of crude oil which has resulted in substantial accumulations of crude and refined oil for more than a year and from present indications the critical point will be reached early in 1939. The Central Committee of California Oil Producers, official curtailment group, has again set the permissible allotment at 610,500 bbls. per day with an additional 5,000 bbls. to take care of contingencies. This amount was set despite the seriousness of the local situation and in the face of a recommendation of the Bureau of Mines that the allowable be set at 589,700 bbls. per day based on the anticipated consumptive demand.

Standard Oil Co. of California has issued a statement which to all intents and purposes is a direct ultimatum to get production down to requirements immediately. Standard Oil Co.'s statement says in part, "Everyone interested in this industry, whether a small company or a large one, whether only a producer, or a refiner, or a marketer, or a company engaged in all phases of the business, should and must recognize that the present unstable condition of the industry must be corrected if we are to avoid a breakdown. The situation is definitely serious and requires immediate action. The overproduction of crude oil in California has created an uneconomic situation that should be called to the attention of everyone engaged in the oil industry.

"United States Bureau of Mines' figures showing huge additions to oil to storage fully demonstrates this situation. California is producing more oil than can be sold. This in spite of the fact that a great volume of oil is shut in. During the first ten months of 1938 a total of 28,000,000 bbls. of crude oil and products were placed in storage. The total addition for the entire year, it is estimated, will be 33,000,000 bbls. or an average rate of 90,000 bbls. per day. The Bureau of Mines' estimates for December required production in California of 589,700 bbls. per day. Yet the state is producing at the rate of about 666,000 bbls. per day.

"Various estimates indicate a demand during 1939 of approximately 600,000 bbls. per day. Even this contemplates ending the year 1939 with stocks at least as great as at the first of the year. Therefore, if the present rate of crude production is maintained it will mean addition to storage of crude and products during 1939 of at least 24,000,000 bbls. The foregoing clearly indicates the necessity of immediately bringing production into a close balance with demand. Today some purchasers of crude oil foresee that their storage facilities will be full within a few months. Several buyers are already without storage facilities for certain products. The industry cannot afford to add more petroleum to storage. The financial burden is too heavy to carry."

Rio Bravo

The Rio Bravo field, where operators have set a good example for the rest of the state by reducing their maximum allowable production from 400 bbls. per day to 350 bbls. daily, yielded three excellent completions this week. General Petroleum Corp. completed No. 4 Van Ness in Section 2-29-25, flowing 3,675 bbls. of 37.3 gravity oil and 3,100,000 feet of natural gas from the Rio Bravo zone, with bottom of the hole at 11,510 feet. The well was brought in flowing through a 48/64-inch bean and showed a tubing pressure of 925 pounds and a casing pressure of 1,000 pounds. Production was reduced to 350 bbls. per day. Superior Oil Co. completed No. 3 Ruhl, flowing 2,610 bbls. 36.9 gravity oil and 2,340,000 feet of natural gas daily from 11,495 feet. It was brought in flowing through a 26/64-inch bean and showed a tubing pressure of 1,500 pounds and a casing pressure of 1,475 pounds. Early in the week, George F. Getty, Inc., completed No. 3 Ramsey, flowing 6,150 bbls. of 36.7 gravity oil and 4,500,000 feet of natural gas per day from 11,530 feet. It was finished flowing through a 1-inch bean.

Rosecrans

In the Rosecrans field, Republic Petroleum Corp.'s No. 1 Trust, which was returned to production pumping 160 bbls. of clean 31.9 gravity oil per day after the hole had been deepened to the O'Dea zone with bottom at 7,571 feet but plugged back to 7,537 feet. The hole was finished with 301 feet of 6⅝-inch liner including 248 feet of 100 mesh screen landed at 7,537 feet. Universal Consolidated Oil Co. completed No. 6 Trust but a production gauge has not been taken. It looks good for about 1,000 bbls. per day. The hole was carried down to 7,976 feet but was subsequently plugged back to 7,575 feet and finished with 307 feet of 5-inch liner including 189 feet of perforated and cemented through perforations at 7,380 feet. Superior Oil Co. completed No. 12 Maxwell, flowing 830 bbls. of 31.7 gravity oil and 700,000 feet of natural gas per day from the O'Dea zone with bottom of the hole at 7,724 feet. It was brought in flowing through a 38/64-inch bean behind which tubing pressure climbed to 365 pounds and casing pressure to 1,050 pounds. Operators interested in this field are watching the performance of H. B. Oil Co.'s No. 1 Stephens, which was completed a few weeks ago flowing from 10 feet of formation. It may be located west of a fault, in which case it would open up considerable new area for development. Its exact location on the structure is still undetermined due to complicated faulting.

Torrance-Harbor City

Three new wells were completed in the Lomita section of the Torrance field this week and one new well finished in the Harbor City area during the same period. Drilling operations in the Lomita district are gradually declining, but work in the Harbor City district continues to increase. In the Lomita section of the Torrance field Thelma Russell completed No. 2 Clarke, flowing 290 bbls. of clean 26.6 gravity oil per day from 5,122 feet and Louisiana Oil Co. has completed No. 2 Lord flowing 272 bbls. of very clean 26.4 gravity oil per day through a 34/64-inch bean from 5,143 feet. Earlier in the week, Pedro Petroleum Co. completed No. 3 Getty pumping 30 bbls. of 25.9 gravity oil daily from 5,022 feet. In the Harbor City area, General Jetroleum Corp. completed No. 11 Poggi flowing 402 bbls. of 28.6 gravity oil per day from 5,220 feet. This well was brought in flowing through a 32/64-inch bean and showed a flow

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	November 26		November 19			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	.....	.....	.....	.....	852,826	129,788
Fuel oil	.....	.....	58,964	8,423	58,964	.....
Diesel and gas oil	.....	.....	.....	.....	.....	176,726
Gasoline	.....	.....	.....	.....	2,705,801	3,790,592
Kerosene	.....	.....	.....	.....	333,626	328,907
Foreign exports—						
Crude oil	372,613	53,230	227,754	32,536	19,760,012	14,520,954
Fuel oil	150,948	21,564	61,790	8,827	8,092,783	12,970,819
Diesel and gas oil	190,782	27,255	31,848	4,550	5,344,014	7,390,048
Gasoline	122,661	17,523	167,940	23,991	7,245,203	7,450,212
Kerosene	.....	.....	5,223	748	950,751	2,003,872
Asphalt	.....	.....	7,563	1,080	7,563	.....
Lubricants	.....	.....	.....	.....	175,560	12,984
Other unfinished oil	.....	.....	.....	.....	.....	974,785
Coastwise-domestic—						
Crude oil	130,313	18,616	60,611	8,659	10,429,733	5,281,294
Fuel oil	551,057	78,722	142,837	20,405	11,295,646	14,064,095
Diesel and gas oil	6,637	948	15,833	2,262	1,408,079	2,090,052
Gasoline	307,679	43,954	286,092	40,870	13,404,146	14,653,056
Kerosene	5,480	783	12,177	1,740	240,556	417,562

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	54,916	7,845	.....	.....	251,560	299,315
Gasoline	.....	.....	.....	.....	25,409	151,052
Kerosene	.....	.....	.....	.....	16,124	72,750
Asphalt	.....	.....	.....	.....	490,039	413,885
Lubricants	.....	.....	.....	.....	19,945	28,548
Foreign exports—						
Crude oil	37,879	5,411	.....	.....	4,778,370	3,060,195
Fuel oil	.....	.....	34,644	4,949	2,323,258	1,871,261
Diesel and gas oil	56,630	8,090	129,801	18,543	3,052,566	2,802,383
Gasoline	282,779	40,397	95,912	13,702	5,167,496	5,036,332
Kerosene	.....	.....	.....	.....	696,099	915,194
Asphalt	.....	.....	.....	.....	56,258	.....
Lubricants	.....	.....	8,463	1,209	534,142	526,989
Coastwise-domestic—						
Fuel oil	109,612	15,659	147,612	21,087	5,854,882	5,997,785
Diesel and gas oil	35,818	5,119	48,296	6,899	1,436,586	1,360,827
Gasoline	133,465	19,066	131,409	18,773	7,102,296	5,522,207
Kerosene	38,714	5,531	16,255	2,322	597,747	393,308

TOTAL TANKER SHIPMENTS FROM CALIFORNIA TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Crude oil	.....	.....	.....	.....	852,826	129,788
Fuel oil	.....	.....	58,964	8,423	58,964	.....
Diesel and gas oil	54,916	7,845	.....	.....	251,560	476,041
Gasoline	.....	.....	.....	.....	2,731,210	3,941,644
Kerosene	.....	.....	.....	.....	349,750	401,657
Asphalt	.....	.....	.....	.....	490,039	413,885
Lubricants	.....	.....	.....	.....	19,945	28,548
Foreign exports—						
Crude oil	410,492	58,642	227,754	32,536	24,538,382	17,581,149
Fuel oil	150,948	21,564	96,434	13,776	10,416,041	14,842,080
Diesel and gas oil	247,412	35,345	161,649	23,093	8,396,580	10,192,431
Gasoline	405,440	57,920	263,852	37,697	12,412,699	12,486,544
Kerosene	.....	.....	5,223	746	1,646,850	2,919,066
Asphalt	.....	.....	7,563	1,080	63,821	.....
Lubricants	.....	.....	8,463	1,209	709,702	539,973
Other unfinished oil	.....	.....	.....	.....	.....	974,785
Coastwise-domestic—						
Crude oil	130,313	18,616	60,611	8,659	10,429,733	5,281,294
Fuel oil	660,669	94,381	290,449	41,493	17,150,528	20,061,880
Diesel and gas oil	42,455	6,065	64,129	9,161	2,844,665	3,450,879
Gasoline	441,144	63,021	417,501	59,643	20,506,442	20,175,263
Kerosene	44,194	6,313	28,432	4,062	838,303	810,870

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pressure of 185 pounds. General Petroleum should have No. 12 Poggi ready for a production test before the close of the week as it began flowing a few days ago during a water-shut-off test. A satisfactory water shut off was not effected and preparations are under way to put a plug in the bottom of the hole. R. R. Bush Oil Co. carried No. 1 Torino in the Harbor City area down into the basement Schist at 5,947 feet and failing to find production in the bottom of the hole abandoned the lower portion. Top of the Nodular shale was logged at 5,650 feet but the conglomerate that was expected to be found productive was absent entirely.

Huntington Beach

Southwest Exploration Co. completed the first two tideland wells in the Huntington Beach field but neither showed large production. This was not disappointing, however, as they were bottomed in an area that has been subjected to drainage over a period of several years. Both were drilled from surface locations on Standard Oil Co.'s Huntington Lease B located adjacent to the ocean front. No. 1 State was completed pumping 145 bbls. of 25.6 gravity oil, cutting 7 per cent, with bottom of the hole at 4,296 feet. No. 2 State pumped 120 bbls. of 25.6 gravity oil, cutting 8 per cent, from 4,296 feet. The latter well was carried down to 4,350 feet but plugged back to the completion depth because of bottom water. Southwest Exploration Co. owned jointly by Hancock Oil Co. and Signal Oil Co. is running two strings of tools and has two additional derricks erected for immediate work. Southwest Exploration Co. was the highest bidder and received the State's contract covering development of state tidelands located adjacent to production in the Huntington Beach field. The contract called for the drilling of 86 wells west of Twenty-third street and parallel with the shoreline and Southwest Exploration Co. will pay the state a sliding scale of royalties ranging from 16 to 65 per cent depending upon the production secured. Just when everything looked promising for drilling operations the city of Huntington Beach stepped in and threatened to file suit to prevent performance of the contract because it would not grant permission to cross a city street. The matter was subsequently straightened out and through an agreement the city of Huntington Beach will receive from Southwest Exploration Co. the sum of $175,000 in cash and an additional payment equal to 2 per cent of the state's royalty. The agreement also provides that Southwest Exploration Co. must furnish the city of Huntington Beach with survey of all wells indicating just where they have been bottomed.

Montebello

The west end of the Montebello field is showing increased development with most operators concentrating on the fourth finger of the sixth zone that has proved highly productive in several wells completed to date. This finger has proved the most productive as the other measures in the town lot area have failed to show sustained production. During the week, Standard Oil Co. recompleted No. 3 Braun flowing 860 bbls. of clean 36.1 gravity oil per day from the fourth finger of the sixth zone with bottom of the hole at 6,700 feet. This well, which was brought in flowing through two 1-inch beans, was originally completed higher up in the hole but failed to hold up. The company is grading locations for two wells to be drilled on the Braun lease. Brookline Oil Co. is making preparations to complete No. 1 Drake which has been deepened to 6,705 feet. Several new wells are being started, and plans call for a further expansion of drilling by several operators. Union Oil Co. is making rapid progress with No. 1 Calkins located in the eastern end of the western extension but still has another 3,000 feet of hole to make before reaching completion depth. Hathaway Oil Co.'s No. 1 Dore the most southwesterly producing well in the field, and which is believed to have found a zone that has not yet been logged on top of the structure, is holding up in good shape as present production is 390 bbls. per day through a 32/64-inch bean.

Wilmington

In the Wilmington field Union Pacific Railroad Co. is carrying well No. 94 down to the Ford zone. George F. Getty, Inc., recompleted No. 4-W after deepening the hole from the Terminal zone to the Ford zone, but the well was only good for 75 bbls. of 28.9 gravity oil, cutting 7 per cent. The hole was carried down to 5,693 feet and finished with a 5¾-inch liner including 490 feet of perforated. Signal Oil Co which has been awarded a contract to develop tideland deposits in the Long Beach

Harbor section of the Wilmington field has not yet completed preparations to start development work.

Los Angeles Basin

De Soto Oil Co.'s deep test in the Long Beach field at Burnett and Gundry streets is creating more excitement than any other well in the state at the present time. The well is being swabbed. De Soto is drilling this as a joint project with other operators holding adjoining acreage who will all profit if satisfactory production is developed. The well is down 10,150 feet and sponsors expect it to produce at least 1,000 bbls. per day. Core recovery since 9,981 feet has been poor and as a result the exact amount of oil sand found is unknown. A 7-inch water string has been landed at 9,741 feet and liner has been run in preparatory to making an actual bid for production. Several formation tests proved inconclusive due to mechanical trouble and thus the well was still an enigma at last report.

Several operators have already started consolidating holdings into ten-acre leases and one operator is leasing a number of parcels for deep zone development. If De Soto Oil Co. gets large production it may lead to abandonment of curtailment there because it would be impossible to regulate production of the Long Beach field due to the various diversified interests.

Basin Oil Co. finished an excellent producing well in the Potrero field of Los Angeles County. No. 2 Potrero flowing 560 bbls. of very clean 40.9 gravity oil and 360,000 feet of natural gas per day from 6,035 feet after the hole had been carried down to 6,176 feet and then plugged back to the completion depth. The well flowed through a 30/64-inch bean and showed a tubing pressure of 350 pounds and a casing pressure of 925 pounds.

San Joaquin Basin

Continental Oil Co. abandoned No. 1-E Kern County Land in Section 17-30-26 in the Strand-Stevens district of Kern County and No. 3-8-A Kern County Land in the Wasco district. The former was abandoned at 8,577 feet after a production test indicated that it was not commercially productive. The company drilled No. 3-8-A Kern County Land to 13,644 feet and plugged back by stages to 10,972 feet for a series of tests. Continental's operations in the Wasco district which it discovered several months ago consist of one commercial producing well, a well in bad mechanical shape but still capable of producing a small amount of crude, and No. 3-8-A which was abandoned this week. Both Standard Oil Co. and Continental Oil Co. are proceeding with additional drilling.

In the Round Mountain field of Kern County, Richfield Oil Corp. abandoned No. 2 Olcese in Section 17-28-29 as a duster at 2,149 feet. This outpost failed to find production in either the Vedder or Jewett zones.

In the Kettleman North Dome field, Kenda has completed No. 27-8-Q in Section 8-22-18 flowing 1,450 bbls. of relatively clean 34.5 gravity oil and 100,000 feet of natural gas per day from the Temblor with bottom of the hole at 8,710 feet. The well was brought in flowing through a 28/64-inch bean and showed a tubing pressure of 150 pounds and a casing presure of 650 pounds.

Coastal Area

The Texas Co. finished a commercially productive well in the Shiells Canyon field of Ventura County early this week and is making preparations to begin work on another well on the same property. The new well was No. 135 Shiells in Section 4-3-19 and it was brought in flowing 103 bbls. of clean 31.1 gravity oil and 45,000 feet of natural gas per day from 4,066 feet. British American Oil Producing Co. is making good progress on No. 7 Hartman in the Ventura Avenue field, which the company is drilling for the joint account of itself and Bolsa Chica Oil Co. The well is located on the north flank of the Ventura Avenue structure and close to General Petroleum Corp.'s large well, finished a few months ago in the deep 57 zone. Tide Water Associated Oil Co., largest holder of productive acreage in the Ventura Avenue field, also has several wells headed down into the deep zone.

Continental Oil Co. abandoned No. 2 La Laguna, a wildcat in the Zaca Creek district of Santa Barbara County as a dry hole at 5,682 feet. Top of the Franciscan basement was logged at 5,635 feet and the Monterey section which had been expected to be productive was entirely absent. In the Newhall field, Barnsdall Oil Co. is nearing completion with No. 4 Rancho San Franscisco in Section 26-4-17 and should have the well ready for a production test within a week as it is coring ahead in the pay.

N. Y.-Penna. Gas Fields

COUDERSPORT, Pa., Dec. 5.—Two wells were completed during the past week in the Oriskany sand gas fields of northern Pennsylvania and southwestern New York, one as a producer and the other as a dry hole. The producer was completed by Hanley & Bird on the F. Rook farm in Harrison Township, Potter County, with an initial open flow of 1,900,000 feet. This well topped the Oriskany at 5,113 feet and got the first gas at 5,119 feet. The original flow of 1,300,000 feet was increased by two shots.

The wildcat test of Clancey and others on the D. Hovey farm in Addison Township, Steuben County, was abandoned as a dry hole at 4,016 feet. This test found an Oriskany streak at 4,623-47 feet and another beginning at 3,950 feet but both were dry.

Announcement was made of four new locations during the week also, two each in New York and Pennsylvania. In New York, the Cunningham Natural Gas Co. is moving in equipment to drill a No. 2 on the William Shear farm, Willing Township, and G. L. Cabot, Inc., has staked a location on the C. W. Vossler farm, Alma Township, both in Allegany County.

Both of the new Pennsylvania operations are wildcats. G. L. Cabot, Inc., has staked a location on the William Cobb farm in Allegany Township, Potter County. This township lies in the north central section of the county and is trisected by the Hebron and Coudersport anticlines. The P. B. Oil Co. has spudded in a test on Tract 5574 in Hamilton Township, McKean County. A well drilled in this township last year found gas in the Oriskany but it was drowned out by salt water after a shot. It topped the Oriskany at 4,750 feet.

One of the seven current Potter County operations topped the Oriskany sand during the past week and is deep in the formation without recording a show. This is the G. L. Cabot, Inc., test on the Emma Elliott farm, Harrison Township, which topped the Onondaga at 5,079½ feet and the Oriskany at 5,109 feet and is now drilling at 5,136 feet.

Most active of the Potter County areas is Bingham Township where Sylvania Corp. is drilling at 4,710 feet on the Roy Harrison farm after passing through the Tully at 4,499-4,550 feet; G. L. Cabot, Inc., is drilling at 4,058 feet on the Mary Lebar farm, and Updegraff and others are drilling at 2,150 feet on the Fred Whitney lot. In the other Potter County operations Belmont Quadrangle Drilling Co. is drilling at 3,995 feet on the R. M. Wolcott farm, Sharon Township; New York State Natural Gas Co., at 2,355 feet on the Bennie E. Truax farm, Harrison Township, and Evjen, Harris and others are shut down on the A. R. Mitchell farm, Sweden Township.

McKenry and others are shut down again on the Stellman farm test in Rockland Township, Venango County, this time at 4,971 feet; New Penn-McKean are rigging up on the Glenn Taylor farm in Ceres Township, McKean County, and Wasson and others remain shut down at 5,358 feet on the E. S. Collins farm, Howe Township, Forest County, the other Pennsylvania operations.

One of the eight wells drilling in Steuben County, New York, reached the Oriskany sand last week and is shut down to case. This is the G. L. Cabot, Inc., No. 1 test on the Charles Crane farm, Woodhull Township, which reached the Onondaga at 3,705 feet and the Oriskany at 3,741 feet. It was drilled 3 feet into the sand.

Three other wells are drilling in Woodhull Township: G. L. Cabot, Inc., is drilling at 3,210 feet on the Charles Crane No. 2 and is shut down at 300 feet on the George Hotaling No. 2 and Clancey is drilling at 1,235 feet on the School District No. 5 property. Other Steuben operations are in West Union Township where G. L. Cabot, Inc., is shut down at 5,038 feet on the Elmer Downey farm; in Troupsburg Township where New York State Natural Gas Co. is drilling at 4,910 feet on the Sarah Hammond farm; in Addison Township where Van Gelder and others are fishing at 2,791 feet on the Fred Farnham farm, and in Cameron Township where New York State Natural Gas Co. is drilling at 510 feet on the Boyd farm.

In Willing Township, Allegany County, Cunningham Natural Gas Co. is drilling at 4,852 feet on the Fortner farm; Empire Producing Co., at 4,590 feet on the No. 2 Dan Clark, and Empire Producing Co., shut down at 1,795 feet on the No. 2 Floyd Wilson. G. L. Cabot, Inc., is drilling at 4,385 feet on the Empire-Rogers farm, Alma Township, where it encountered the Tully at 4,298-4,353 feet and Belmont Quadrangle Drilling Co. is drilling at 3,575 feet on the Elwin Livermore farm in Independence Township.

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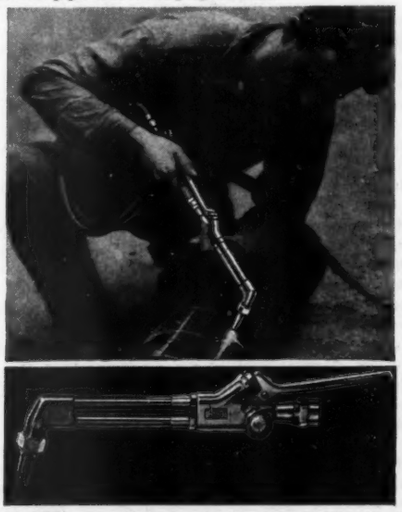

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By
D. H. STORMONT

Bennett and Wasson-Denver Pools May Be One Big Pool

FORT WORTH, Tex., Dec. 5.—Possibility of linking the Bennett pool of south central Yoakum County with the Wasson-Denver area on the Gaines and Yoakum County line was seen when J. E. Mabee brought in his No. 1 Willard, between the two pools for an estimated 15 to 20 bbls. of oil per hour. While only a mile and a quarter southwest of the Bennett pool, No. 1 Willard, in Section 741, Block D, J. H. Gibson Survey, is 3½ miles northeast of the Honolulu Oil Corp. No. 1 R. M. Kendrick, mile and a half east extensioner to the Denver-Wasson pool. The Honolulu well was completed for a natural flow of 528 bbls. daily. The well found saturated lime at 5,040-5,227 feet, total depth. Due to limited pipe line facilities in the area, the new discovery is not expected to greatly stimulate the drilling of link wells. Should the drilling of more wells in the area definitely link the two great structures, it will mean a pool with dimensions approximating 14 miles long and 8 miles wide.

In the Slaughter pool of Hockley County, Murchison & Closuit No. 1 Slaughter, southwest offset to Gulf Oil Corp. No. 2 Mallett, 3-mile northeast extension of a month ago, was shut in for potential test. The well flowed for 21 hours, only the last hour having been into tanks which netted 18 bbls. The well received three-stage acid treatment at 4,981-5,056 feet.

Garza County's deep wildcat drilled by the Gulf Oil Corp. on the Swenson lands, Section 25, Block 2, H.& G.N. Survey, after having been drilled to a total depth of 8,104 feet, is reported to be flowing oil from a plugged back depth of 7,400 feet. The well is reported to have headed 50 feet over the derrick from an unidentified formation. This test has been drilled as a tight well from its spudding and no details regarding the well's preformance are available.

South and Central Basin

The staking of six new wildcats in the Central and South Permian basin featured the week's development in those areas. Two of the tests were made in Andrews County and one each in Pecos, Schleicher, Ward, and Mitchell counties.

In Andrews County, Anderson & Pritchard and Osage Drilling Co. located their No. 1 University in Section 13, Block 14, of the University Survey, and Honolulu Oil Corp. located its No. 1-18 J. E. Parker in Section 18, Block A-44, P.S.L. Survey. George T. Abell and others staked No. 1 Baldwin in Pecos County, Section 24, Block 9, H.&G.N. Survey and are rigging up for immediate spudding.

Schleicher County's new operation was by the Lone Star Gasoline Co. which staked No. 2 Bert Page in Section 46, Block L of the G.H.&S.A. Survey. This is the first of two tests to be drilled by Lone Star in the area where Cooper Gas Co. recently completed two gas wells in Section 40, midway between Lone Star's tests. Mitchell County's new test is by the Ajax Drilling Co. in the Scheuster lands of Section 25-17, S.P. Survey, 6 miles east of the Chalk pool of Howard County. A Ward County wildcat, Edwards & Donnelly No. 1 J. S. Reynolds will be drilled in Section 34, Block 1, H.&T.C. Survey.

Possibility of an extension to the University pool of eastern Crane County was indicated when Standard Oil Co. of Texas No. 1-6 University, Section 6, Block 30, about a half-mile northwest of the pool, began heading an unestimated amount of oil every three hours while cleaning out. The well had been shot with 680 quarts at 3,127-3,270 feet after which it was reported to have flowed 30 bbls. of oil per hour into pits.

In Reeves County, Anthony (formerly Lagoki) No. 1 Richards-Shaw, prospective shallow pool opener in the western part of the county near the town of Toyah, was preparing to deepen in search of a lower pay. The well made several heads of oil while drilling from 1,612-30 feet and commercial production was indicated, however, as the week closed, the well was making only occasional heads. Location is in Section 16, Block 59, P.S.L. Survey.

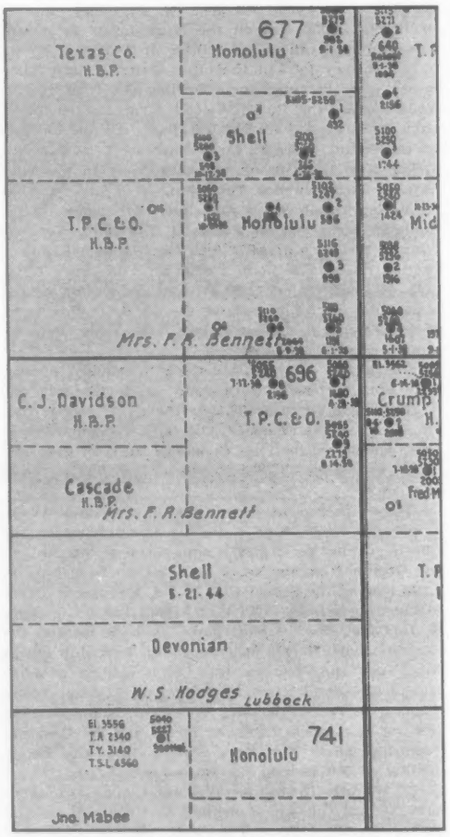
WEST CENTRAL TEXAS

The indication of two new producing areas, one each in Haskell County and Jones County, centered the attention in West Central Texas area.

Discovery of a new oil pool in the southeastern part of Haskell County was assured when a wildcat, abandoned last summer by Fain & McGaha, was recompleted by P. S. Kendrick. The well, in the T. G. Hendrick lands, made 70 bbls. of oil with 117 bbls. of water on the pump in 17 hours after which it was shut down due to lack of storage. Production is from what is believed to be the Cross Cut sand from 2,692 feet to 2,707 feet.

Jones County's prospective pool opener is the L. Heydrick and others No. 1 Akard, in the Guadalupe Martinez Survey, on a block of 1,300 acres. It is located about 7 miles west of the Sales pool and approximately 18 miles northwest of Abilene. The test had a showing of oil from 2,025-35 feet where it cemented 8¼-inch casing but after the plug was drilled the test was deepened to 2,140 feet where it is making a bailer of oil every 30 minutes from 5 feet of sand.

Production from sand at 1,200 feet will be sought by Sam Henderson in an Eastland County location staked in the E. N. Strickland lands, 2 miles south of Cisco. It is in Section 45-3, H.&T.C. Survey.



Southwestern Mapping Co., Fort Worth

Possible linking of the Bennett pool of Yoakum County and the Wasson-Denver pool of Gaines and Yoakum counties may be made by the John Mabee test in Section 741, about 1 mile southwest of Bennett pool

WEST TEXAS COMPLETIONS

(24-hour tests)

Andrews County

Shell Petroleum Corp. No. 2 J. S. Means, 4,400-4,515 feet, 1,189 bbls.

Crockett County

Stanley Lewis and others No. 1 A. C. Hoover, dry and abandoned at 1,483 feet.

Ector County

Devonian Oil No. 1-G Scharbauer, dry and abandoned at 4,226 feet. Gulf Oil Corp. No. 133 Goldsmith. 4,140-67 feet, 1,328 bbls.; No. 136 Goldsmith, 4,125-83 feet, 500 bbls.; No. 137 Goldsmith, 4,137-97 feet, 544 bbls. J. E. Mabee No. 3 Paul Moss, 4,040-4,200 feet, 2,689 bbls. Stanolind Oil & Gas Co. No. 10-A E. F. Cowden, 3,976-4,170 feet, 1,037 bbls.

Gaines County

Amon G. Carter No. 2-C Wasson, 4,889-4,980 feet, 1,530 bbls.

Howard County

Continental Oil Co. No. 3-D O. Chalk, 1,775-98 feet, 365 bbls. Magnolia Petroleum Co. No. 10 O'Daniel, 2,638-2,800 feet, 515 bbls.; No. 4 M. H. O'Daniel, 2,020-2,801 feet, 248 bbls. Moore Brothers No. 3-B O'Daniel, 2,632-2,836 feet, 147 bbls. Shell Petroleum Corp. No. 4-A T.&P. lands, 2,620-2,835 feet, 299 bbls.

Irion County

Perry Fox No. 1 J. M. Nutt, dry and abandoned at 1,580 feet.

McCulloch County

Noble No. 1 L. A. Patton, 1,559-65 feet, 4,580,000 feet gas.

Pecos County

Childress Royalty Co. No. 2 W. T. Shearer, 1,449-83 feet, 395 bbls. H. G. Eastham No. 1 Stanolind-University, 1,582-98 feet, 677 bbls. J. L. Greene No. 1 Gulf-Shearer, dry and abandoned at 1,552 feet. H. H. Side No. 1 Blackstone-Slaughter-Lackey, dry and abandoned at 2,160 feet. W. H. Street No. 1 Texas-Shearer, 1,400-32 feet, 136 bbls.; No. 4 Texas-Shearer, 1,388-1,455 feet, 196 bbls. Superior Oil No. 6 Iowa Realty Trust, 1,627-56 feet, 98 bbls.

Sterling County

John W. Sward No. 1 T. S. Brennard, dry and abandoned at 3,011 feet.

Upton County

Gulf Oil Corp. No. 181 McElroy, 2,765-2,994 feet, 1,233 bbls.; No. 182 McElroy, 2,825-3,035 feet, 566 bbls. Hancock & Knox No. 2 Republic-Baker, dry and abandoned at 2,375 feet. Shell Petroleum Corp. No. 5 Baker, 2,170-2,211 feet, 945 bbls.; No. 4 Rogers, 2,217-2,328 feet, 211 bbls.

Winkler County

Gulf Oil Corp. No. 67 L. Daugherty, 2,928-3,006 feet, 223 bbls.; No. 29 Keystone, 3,270-3,397 feet, 558 bbls. Texon Oil & Land No. 3 E. W. Cowden, 2,841-2,956 feet, 633 bbls.

Ward County

Ja-Chel Oil No. 1 J. W. Sullivan, 2,042-2,078 feet. 231 bbls. Gulf Oil Corp. No. 108 Estes, 2,453-2,685

(Continued on Page 86)

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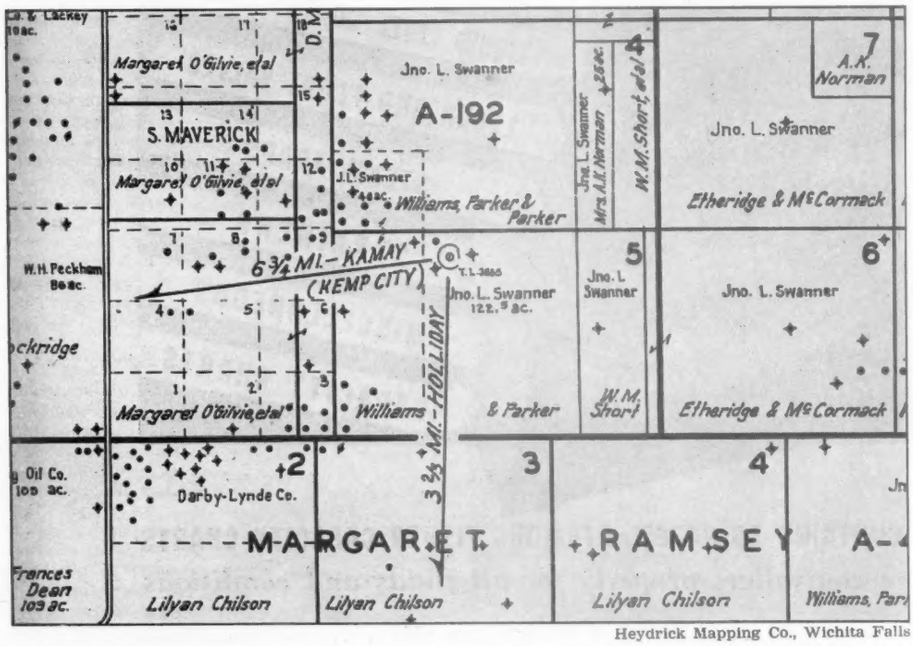
North and East Texas

By
D. H. STORMONT

K. M. A. Extended Eastward; More Activity in East Texas

WICHITA FALLS, Tex., Dec. 5.—Extension of production 1½ miles to the east on the south end of the K.M.A. pool of Wichita County was believed assured in the John L. Swanner No. 1 Williams, Block 5, J. McCool Survey, Abstract 192. The well has been estimated at 75 to 100 bbls. daily. Showings of oil were present at 3,976-88 feet, at 3,996-4,002 feet, and at 4,032 feet. No water was found but for a production test the hole was plugged back to 4,024 feet. It was shot with 280 quarts and responded by flowing the oil load, and then made a head of oil, with no water showing. The crew was still testing before running tubing for completion.

The tenth producer in the Holliday pool of southern Wichita County and northern Archer County highlighted developments there. In the southwest extension area, which lies across the line in Archer County, Madden & Goldsmith, discoverers of the pool, were drilling plug from No. 1 Martin, Section 22, Block 4. The well showed oil in the Canyon sand from 2,612-19 feet and is expected to make as good a producer as has yet been completed in the pool.



Heydrick Mapping Co., Wichita Falls

John L. Swanner No. 1 Williams, in Block 5, J. McCool Survey, assures the K.M.A. pool of a mile and a half east extension to the south end of the pool. The well is estimated at 75 to 100 bbls. per day

About 3 miles northeast of the Hull-Silk pool of northern Archer County, a wildcat that has been shut down for over three months will be deepened to the 4,300-foot level in search of production. S. D. Johnson and Jack Prince have taken over the J.K.L. Oil Corp. No. 1 Walter Ford, in the T. Cecil Survey, and will deepen it, possibly to 4,600 feet. The wildcat is shut down at 4,200 feet where it showed salt water in the Strawn pay after the casing was perforated for a test. A considerable play northeast of the Hull-Silk pool resulted after early showings in this test, however, no other holes were drilled in the area after it encountered the salt water.

In Cooke County, the second producer in the Walnut Bend deep Strawn area and a quarter-mile extension to the pool, was indicated by the Sinclair Prairie Oil Co. No. 2 J. M. Best, located in the Thomas Toby Survey, Abstract 1054. The test recovered 11 feet of oil sand on a core taken at 4,909-20 feet. The crew will set casing for a test. The discovery well was completed several months ago for about 1,000 bbls. per day.

EASTERN TEXAS

DALLAS, Tex., Dec. 5.—General activity in eastern Texas showed an increase over several weeks past, both in the East Texas field and in the East Central Texas district.

Twenty-eight wells were completed in the past week in the East Texas field for an aggregate initial production of 1,489 bbls. per hour. These figures compare favorably with last week's total of 17 wells completed for an initial of 848 bbls. and the total of two weeks ago of 16 wells for an initial of 849 bbls. This increase in completions is not, however, to be considered as a sign of accelerated activity in the field, as there were only 36 wells drilling and 20 locations staked, a decline of 14 operations from the previous week. In the week to come it may be seen whether or not the drilling wells are merely being completed leaving a general decrease in activity or whether the new locations will increase thus proving it to be a general pick-up for the field.

Flag Lake Field

Attempting to link the southwest extension area of the Flag Lake pool of Henderson County, the Texas Co. No. 3 Nolan, in the Nathan Parsons Survey, is one of the closely watched tests of eastern Texas. It is the first attempt to connect the southern area, which was opened by the Texas Co. shortly after the main part of the pool was discovered to the north. The test is now producing some oil and a little gas with less than 1 foot of penetration into the producing horizon taken. The hole is bottomed at 3,043 feet.

Navarro Crossing Pool

The southwest edge of the Navarro Crossing Woodbine sand oil pool of northwestern Houston County apparently has been defined by the Humble Oil & Refining Co., discoverer of the pool, in its No. 1 Taylor & Dailey. The Humble No. 1 Taylor & Dailey, about a half mile west of the pool proper, was bottomed at 5,875 feet with no showing of oil in the field's producing sand.

New Locations

Two locations were staked in the eastern Texas area, one each in Falls County and Henderson County. Four miles east of Chilton and in the J. A. Manchaca Survey of Falls County, R. L. Seastrunk staked No. 1 J. B. Trewitt, J. V. Scrivenor located his No. 1 William Richardson Estate in the F. Holland Survey, 6 miles northwest of Athens in Henderson County.

EAST TEXAS FIELD COMPLETIONS

(One-hour tests)

Gregg County—Longview Area

Atlantic Refining Co. No. 7 A. Christian, 3,566-3,669 feet, 102 bbls.; No. 21 H. Pritchard, 3,496-3,587 feet, 94 bbls. Gulf Oil Corp. No. 20 J. H. Bozeman, 3,584-94 feet, 42 bbls. Humble Oil & Refining Co. No. 10 J. M. Adams, 3,458-84 feet, 42 bbls. Magnolia Petroleum Co. No. 9 W. R. Nickolson, 3,665-78 feet, 72 bbls. Shell Petroleum Corp. No. 22 J. W. Aiken, 3,522-3,615 feet, 52 bbls.; No. 28 W. T. Burnside, 3,496-3,610 feet, 52 bbls.; No. 29 W. T. Burnside, 3,500-3,602 feet, 54 bbls.; No. 21 Fishburn, 3,488-3,601 feet, 60 bbls. Sinclair Prairie Oil No. 62 M. Moncrief, 3,540-3,660 feet, 80 bbls.; No. 63 M. Moncrief, 3,540-3,659 feet, 70 bbls. Stanolind Oil & Gas No. 14 J. B. Doby, 3,465-3,519 feet, 70 bbls.

Gregg County—Kilgore Area

Delta Drilling Co. No. 3 Barber Estate, 3,505-18 feet, 40 bbls. C. V. Landsberry No. 28 A. Money, 3,594-95 feet, 70 bbls.; No. 29 A. Money, 3,686-87 feet, 60 bbls. Phillips Petroleum Co. No. 5 I.&G.N.R.R., 3,551-3,600 feet, 40 bbls.

Rusk County—Joiner Area

Humble Oil & Refining Co. No. 8 O. R. Holt, 3,776-88 feet, 45 bbls.; No. 73-A M. & R. Kangerga, 3,659-69 feet, 65 bbls. Luling Oil & Gas No. 3 Fredrick, 3,549-3,609 feet, 10 bbls. Ohio Oil Co. No. 26 Clay Heirs, 3,550-3,645 feet, 20 bbls.; No. 5 Rollins, 3,594-3,653 feet, 36 bbls.; No. 13 M. L. Thompson, 3,606-28 feet, 55 bbls.

Rusk County—Kilgore Area

Selby-Lewis No. 10 L. C. Peques, 3,639-66 feet, 72 bbls.; No. 11 L. C. Peques, 3,609-42 feet, 60 bbls.

Smith County—Joiner Area

Georgton Oil Corp. No. 2-C Cole, 3,840-41 feet, 32 bbls. Osher-Goldsmith No. 2 E. E. Moore, 3,778-79 feet, 18 bbls. A. McCutchin No. 6 Brooks-Attaway, 3,789-90 feet, 47 bbls.

Upshur County—Longview Area

Humble Oil & Refining Co. No. 8 E. W. Smith, 3,622-43 feet, 29 bbls.

EAST CENTRAL TEXAS COMPLETIONS

Anderson County

Palestine Oil & Gas No. 2 G. Robinson, 5,341-49

(Continued on Page 86)

Texas and Louisiana Gulf

By
NEIL WILLIAMS

Field Opened in Louisiana and in Harris County, Tex.

HOUSTON, Tex., Dec. 5.—Two new fields were being opened along the Texas and Louisiana sectors of the Gulf Coast as preliminary tests on two wildcats showed favorable results. The wildcats are located on the Mt. Houston prospect, Harris County, and on the West Lake Verret prospect in St. Martin Parish. Other interesting developments included important extensions to the League City field, Galveston County, and at Francitas in Jackson County.

The Mt. Houston prospect, northeast of Houston, Harris County, was being added to the list of new fields on the Texas coast, as Jack Frazier and others No. 1 Griffith, Adam Smith Survey, was cleaning out, flowing one-half barrel of fluid per hour of which 10 per cent was oil and the balance wash water. This test was drilled to the Yegua formation at a total depth of 8,348 feet, and was plugged back to 4,088 feet to test the Frio sand which showed favorable indications on an electrical survey. Five and one-half inch casing was cemented at 4,090 feet, and the well is flowing from perforated casing at 4,073-77 feet. The well is expected to take several days to clean itself of wash-water and drilling-mud in view of the fact that it is cleaning out very slowly due to the lack of gas pressure.

The Francitas field, Jackson County, opened approximately three weeks ago by the Texas Co. as a distillate field, was converted into an oil field by the completion of Crosby Drilling Co. No. 1 Broughton, about a mile north of the discovery well. This well was drilled to a total depth of 7,417 feet and was completed through perforated casing at 7,393-97 feet for an initial production of 12 bbls. of 42-gravity oil per hour, flowing through a three-eighths inch choke with tubing pressure 1,850 pounds and casing pressure 2,025 pounds.

The well is in the center of lots 44 and 45, P. Green Survey, about three miles south of the town of Francitas. The discovery well, Texas Co. No. 1 Weed, flowed distillate from perforated casing at 7,460-65 feet.

League City Field

In the newly opened League City field, Galveston County, George Echols was running 7-inch casing in No. 1 Stewart-Ross, one-half mile west of the discovery well. The hole is bottomed at 9,116 feet with the discovery sand section logged at 9,066-9,105 feet. The sand was topped slightly higher than in the discovery well, and several possible oil and gas sands were also logged in the upper Frio section. The latter sands were also logged in the discovery well, but were not tested. East of the discovery well, Midstates Oil Co. No. 1-A Maco Stewart was coring below 8,900 feet and is expected to core the main pay within the next two days. Phillips Petroleum Co., which purchased the holdings of the Midwest Royalty Co., has started drilling operations on No. 1 Dr. O. Patton, northeast of the discovery well.

Dry and Abandoned

Two miles north of the above field, H. C. Cockburn No. 1 Haardt, Stephen Austin Survey, was abandoned at 9,000 feet with no showings of oil or gas reported. On top of the Frio marker this test ran approximately 280 feet higher than the discovery well.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 2 Peters, located on the east side of the Fairbanks field, Harris County, tested salt water through perforated casing at 6,963-68 feet, and will be plugged back to the discovery horizon at 6,800 feet, where it is expected to make a gas well. The well was drilled in an attempt to open production from the "Look" sand which produces on the extreme east side of the field, referred to as the Rossyln area. In the latter area, Union Producing Co. No. 1 Fritz Warneke, a west offset to Stanolind Oil & Gas Co. No. 1 Look, was completed for an initial production of 520 bbls. per day through a one-fourth inch choke with tubing pressure 1,100 pounds and casing pressure 1,220 pounds. The hole is bottomed at 6,984 feet, with saturation logged at 6,954-65 feet. This is the best well completed in this area where three previous tests resulted in one oil well and two gas wells.

Humble Oil & Refining Co. No. 1 M. C. Todd, completed last week to extend the Cheek field, Jefferson County, 1½ miles northwest, flowed 650 bbls. of 36.5 gravity oil on a 24-hour potential test. The well was gauged through a quarter-inch choke. Tubing pressure was 1,150 pounds and casing pressure 1,250 pounds. The company's No. 2 Jefferson Land Co., 1½ miles northwest of the Todd well, is drilling below 4,000 feet.

The North Markham field, Matagorda County, received its second producer as Ohio Oil Co. No. 1 Carlson, a north offset to the discovery well, flowed 150 bbls. of 34.4 gravity oil per day through a one-eighth inch choke with tubing pressure 1,375 pounds and casing pressure 2,275 pounds. The well was completed through perforated casing at 7,702-08 feet. Previous tests through perforated casing at 7,759-62 feet and at 7,730-32 feet showed salt water.

Housh & Thompson No. 1 Clary, which opened a small pool northwest of the Conroe field, Montgomery County, is flowing dry gas. On a volume test through a three-eighths inch choke, the well tested 3,420,000 feet of gas daily, with tubing pressure 1,100 pounds and shut-in casing pressure 1,650 pounds. The well was completed in the lower Cockfield sand at 4,739 feet and produced a small amount of oil and much salt water before it began to make dry gas.

Coastal Louisiana

Shell Petroleum Corp., which has carried on an extensive wildcatting campaign in the Coastal Louisiana district during the year, has apparently marked up its second discovery within three weeks as preparations were made to complete No. 1 Hazel Burdin, a wildcat located on the West Lake Verret prospect in St. Martin Parish. This well was drilled to a total depth of 9,833 feet, where a drill-stem test at 9,823-33 feet developed salt water with a slight showing of oil. The hole was then plugged back to 8,049 feet and on a 7-minute drill-stem test through perforated casing at 8,017-20 feet, the well flowed oil and the pressure built up to 500 pounds. The well sprayed oil for 50 minutes and when the drill stem was "broken down," 952 feet of 38-gravity oil was recovered. Screen and liner was being set for final completion. The well is located in Section 15-14s-12e, approximately 15 miles north of Morgan City and about 20 miles east of the Charenton field.

Another producer in the Bancroft field, Beauregard Parish, was indicated as Republic Production Co. was running casing in No. 3 Columbia Land & Timber Co., Section 16-16s-13w. Sand was topped at 7,238 feet and cored to 7,292 feet, the total depth. On a drill-stem test at 7,285-92 feet, 750 feet of oil was recovered.

In the Bateman Lake field, St. Mary Parish, Texas Co. No. 1 Wax Bayou, Section 21-16s-12e, is waiting for orders after testing dry gas through perforated casing at 10,778-803 feet. Drill-stem testing through perforated casing at 10,907-20 feet and at 10,907-12 feet developed oil and salt water.

In the Creole field, in the Gulf of Mexico, offshore from Cameron Parish, Superior Oil Co. and Pure Oil Co. No. 3 State, topped sand at 5,247 feet and cored sand to 5,267 feet, the total depth. Seven-inch casing was cemented at 5,244 feet. This will be the third producer for the field.

In the Raceland field, La Fourche Parish, Amerada Petroleum Corp. No. 3 South Coast Corp., Section 34-15s-19e, flowed 770 bbls. per day through a one-fourth inch choke. The well is producing through perforated casing at 10,123-210 feet, which is the discovery horizon of the field. Tidewater Associated Oil Co. No. 1-A South Corp., Section 34-15s-19e, recently completed to open production from a new sand, flowed 705 bbls. per day through a one-fourth inch choke. It is producing from perforated casing at 7,174-90 feet.

On the Golden Meadows prospect, La Fourche Parish, Texas Co. has been unsuccessful in completing No. 1 LaTerre, a promising wildcat in Section 1-20s-21e. The well was tested last week through perforated casing at 8,850-70 feet and showed 71 stands of salt water and 3 stands of mud and oil. This well showed as a distillate producer at 9,975-10,005 feet, but additional testing at 9,265 feet and 9,230 feet developed salt water.

Texas Co. No. 11 St. Martin Land Co., St. Martin Parish, which has shown evidence of opening production on the Henderson salt dome, tested 38 stands of oil and gas and fresh water on a drill-stem test at 8,060-65 feet. On a previous test at 8,060-70 feet, several stands of mud, gas, oil and salt water were recovered.

In Terrebonne Parish, Texas Co. No. 1 Continental Land & Fur Co., Section 29-18s-14e, is bottomed in a sidetracked hole at 10,075 feet and 9⅝-inch casing was cemented at 10,061 feet. The well was originally drilled to a total depth of 10,039 feet, where a stuck drill stem resulted in the hole being plugged back and sidetracked at 9,984 feet.

Only one wildcat location was reported in the district. Derrick is up for Sid Richardson No. 1 Haas Investment Co., Section 7-28s-3e.

COMPLETIONS ON TEXAS GULF COAST

(24-hour production)

Brazoria County

Hastings field: H. F. Alexander No. 2 Blummer-Steiner, 6,223 feet, abandoned. Humble Oil & Refining Co. No. 10 Alexander, 5,900 feet, 672 bbls., one-fourth inch choke. Lockridge field: Shell Petroleum Corp. No. 6-B Prison Farm, 8,530 feet, abandoned. Old Ocean field: Harrison & Abercrombie No. 1 Chenault, sand 10,010-202 feet, 250 bbls., various chokes. West Columbia field: General Crude Oil Co. No. 1 Campbell, 6,930 feet, abandoned.

Chambers County

Galveston Bay field: Standard Oil Co. of Texas and others No. 3-118 State, sand 5,974-6,005 feet, 624 bbls., one-fourth inch choke. Cotton Lake field: Humble Oil & Refining Co. No. 2-B V. A. Lawrence, sand 6,472-80 feet, 438 bbls., one-fourth inch choke.

Fort Bend County

Thompson field: H. M. Naylor No. 4 F. I. Booth, sand 5,334-5,405 feet, 104 bbls., one-fourth inch choke.

Galveston County

Dickinson field: Pure Oil Co. No. 5 J. W. Shelor, 8,112 feet, 265 bbls., one-fourth inch choke. Hitchcock field: Wittjen Oil Co. No. 1 Coon, 6,600 feet, abandoned.

Harris County

Fairbanks field: Amerada-Stanolind Oil & Gas Co. No. 2 R. L. Berryman, perforated casing 6,837-41 feet, 63 bbls., one-eighth inch choke. Amerada-Stanolind Oil & Gas Co. No. 1-D Chancey, perforated casing 6,840-54½ feet, 66 bbls., one-eighth inch choke. Union Producing Co. No. 1 Warneke, sand 6,954-65 feet, 520 bbls., one-fourth inch choke. H. E. Williams No. 2 Deacon, top sand 6,790 feet, 402 bbls., one-fourth inch choke. Friendswood field: Humble Oil & Refining Co. No. 16 Gray, sand 6,044-55 feet, 605 bbls., one-fourth inch choke. Tomball field: Humble Oil & Refining Co. No. 8 Milo, 5,560 feet, 216 bbls., one-fourth inch choke.

(Continued on Page 91)

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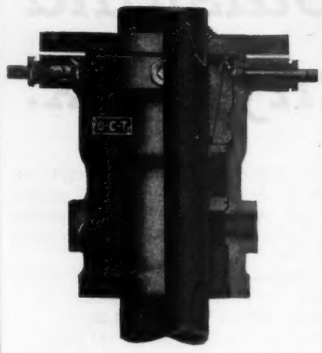

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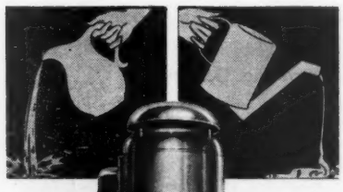

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Among the Drilling

MID-UNION DRILLING CO. has completed the contract on No. 32 Taylor for Humble Oil & Refining Co., and Shell Petroleum Corp. No. A-3 Preston is drilling at 4,000 feet in the K.M.A. district, Texas. Operations have started on No. 2 State for E. W. Jones, Inc., and Frabor-Hodges Corp. in Section 36-7-4 in the St. Louis area of Pottawatomie County, Oklahoma. Mid-Union has also just completed a three-well contract for Panhandle Eastern Pipe Line Co. at Ulysses, Kans., in the north end of the Hugoton area.

M. B. K. DRILLING CO. of Odessa, Tex., extended production in the Foster pool of Ector County a half mile to the north when their No. 2-C Foster flowed 1,275 bbls. daily after being shot with 390 quarts at 4,275 feet. Located in Section 8. Block 42, T.&P. Survey, the well is one-half mile north of Arrow Drilling Co. string of producers which steadily have pushed production to the east.

BRANNON & MURRAY, contractors of Coleman, Tex., have indicated a new pay horizon for the old Echo pool of Coleman County, West Central Texas. The test is No. 1 Dibrell, in the J. W. Hicks Survey, and is reported to be heading oil hourly through 6-inch casing. The well is estimated at 150 bbls. daily from its depth of 3,167-82 feet. The pool, 10 miles northeast of Coleman, has its production from the Fry sand around 1,900 feet.

HARRY BASS, drilling contractor of Dallas, Tex., is drilling the third test for Humble Oil & Refining Co., Tide Water Associated Oil Co. and Seaboard Oil Corp. in the Opelika area of Henderson County. The test is No. 1 S. S. McGee and is running lower than No. 1 McElreath & Suggett, which is classified as a freak oil producer, and higher than No. 1-C McElreath & Suggett, a gas-distillate producer to the southwest of the new test. There are only the two producing wells in the area at the present time and the third test is below 5,255 feet. The area is one of the few East Central Texas lower Marine Trinity producing tracts.

TRINITY DRILLERS, INC. abandoned Robert H. Feltner No. 1 Welder at a total depth of 2,752 feet, and report six active operations in Southwest Texas. Three operations are listed in Jackson County, for Lewis Production Co. and Chapman Minerals; one in Nueces County on a wildcat prospect for L. A. Douglas, and another in Jim Wells County for Transwestern Oil Co. Contract was received from O. W. Killam to deepen No. 1 Myers.

SUMMIT DRILLING CORP., Tulsa, is coring at 4,955 feet in dolomite at No. 1 Johnson, SW SW Section 1-17n-1e, Payne County, Oklahoma.

BIG CHIEF DRILLING CO. has been drilling No. 1 Strateger, NW SW Section 25-9n-2w, Cleveland County, Oklahoma, which is now shut down at a total depth of 7,179 feet. Drilling of this well has been considerably delayed by two cases of stuck drill pipe.

ALLEN & MORRIS received contract from Phillips Petroleum Co. for No. 1 Pavlock to be drilled in the La Rosa field, Refugio County, Texas. This makes the fifth rig to be moved to the field by Allen & Morris. Three operations are reported for Geophysical Service Co., Inc., while another operation is reported for Fred W. Shield on the Sasse lease.

GEORGE ECHOLS is running 7-inch casing in his No. 1 Stewart, a half mile east of the League City discovery well in Galveston County, Texas. Sand showing oil was logged in the main pay at 9,066-9,105 feet and casing will be cemented on bottom at 9,119 feet. Two miles north of the field, H. C. Cockburn No. 1 Haardt has been abandoned at 9,000 feet and the rig is being moved to the field proper for Echols No. 1 Stewart Ross, one-half mile west of the field.

OLSON DRILLING CO., Tulsa, has recently drilled a well in Osage County, Oklahoma, which has made between 3,000,000 and 7,000,000 feet of gas daily in several tests. The well is No. 1 Soldani, NW NW Section 24-26-4e; production is from the Burbank sand which was topped at 3,079 feet. It was drilled to a total depth of 3,102 feet before setting pipe and drilling plug. When the plug was drilled, the tools jammed in the hole. The rig of this drilling company is shut down at No. 1 Seberger, SW NE Section 4-12n-3w, Oklahoma County, Oklahoma, where it is waiting on cement after plugging back to shut off water. In Caddo County this company is drilling No. 1-B Rigney ahead below 3,205 feet, and No. 2-A Royce, NW NE Section 12-5n-9w, is drilling below 2,970 feet. These are wells of the Olson Oil Co.

NOBLE DRILLING CO., Tulsa, is drilling a wildcat for Pure Oil Co. below a depth of 3,260 feet in the Caddo

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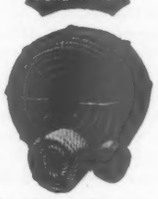

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Contractors

Creek area, northwest of Ardmore, Carter County, Oklahoma, at SE quarter Section 35-3s-1e. The intention has been to drill the well to a proposed depth of 9,000 feet. Slow time has been made on this well since the contractor has taken special precautions to guard against crooked hole trouble. The bit has been in shale formations ever since the test was spudded. A string of 10-inch pipe is due to be set as soon as the shale is drilled through.

JACK FRAZIER, drilling for himself and others at the Mount Houston prospect, northeast of Houston in Harris County, Texas, has apparently opened a new oil field, as No. 1 Griffith is cleaning out, making wash water and oil. The well was drilled to a total depth of 8,348 feet, and it is testing through perforated casing at 4,073-77 feet. Two other operations are reported in Harris County, both being drilled for Jack Frazier. No. 1 Carter, a wildcat, has been spudded, while No. 1 Helberg, in the Eureka field, is drilling below 2,300 feet.

CORBETT-BARBOUR DRILLING CO., Tulsa, has recently moved two strings of cable tools from the Texas Panhandle to the University pool in the vicinity of Odessa, Tex. At one well tools are drilling now below 300 feet; the other string of tools is at a location where rigging up is going on. Wells are to be drilled for the Kewanee Oil Co. on the property acquired at the last University lease sale. The lease consists of 320 acres. Cable tools are being commonly used in the University pool. Two strings of the casing are set: 800 feet of 10-inch surface pipe and 3,600 feet of 7-inch on top of the sand. This drilling company has drilled 10 wells on the McKinney lease of the Kewanee Oil Co. in Gray County in the Texas Panhandle. Drilling is starting at No. 11 McKinney. On this property wells are drilled to a depth of 3,250 feet.

N. W. HUNTER abandoned Wittjen Oil Co. outpost test in the Hitchcock field, Galveston County, Texas, and the rig is being moved to Brazos County where No. 1 Jerichew, E. M. Millican Survey, will be drilled for himself.

HUDSON-HESS DRILLING CO. is now drilling on No. 4 Lyons for the Texas Co. in the North Aden area at Fairfield, Okla. They are now working on the seventh well in the area for the Texas Co. and have spudded in on No. 2 Harris, which is the eighth well.

MANAHAN DRILLING CO., Tulsa, has two rotary rigs operating in the Illinois field. At present it is drilling in the St. Elmo, Ill., area for Carter Oil Co. To date this drilling organization has put down 13 wells in Illinois for this company. The Manahan company is nearing completion of a well being drilled for Sinclair-Prairie Oil Co. in the vicinity of Gainesville, Tex.

CAMPBELL DRILLING CO., Tulsa, is drilling two wells for the Shell Petroleum Corp. in western Kansas. The drilling of these wells is completing the contract entered into several months ago which called for the drilling of 20 wells for this oil company in the Geneseo and Trapp areas by the drilling organizations of Glenn Campbell.

Drilling crew of Union Producing Co. which established a new depth record for Texas by drilling No. 1 Minnie Brown, Agua Dulce field, Nueces County, to below 12,936 feet. C. A. Sullins, engineer, Floyd Kelley, M. R. Kelley, Ted McCauley, George Ferguson, G. B. Harding

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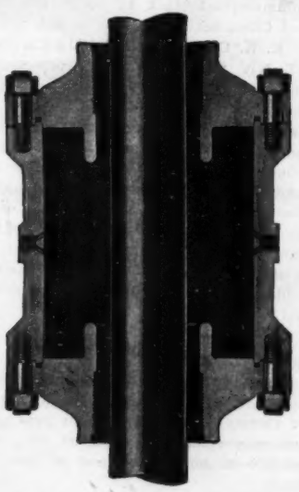

Normally open to the full size of the casing, this Blowout Preventer can be instantly closed by remote control to pack off the opening around any size or shape of pipe, kelly or tool likely to require such pack-off. It allows free passage for bits, fishing tools and other devices. Various designs are available for different conditions and for pressures up to 3000 pounds per square inch.

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Kansas Developments

By
DAL DALRYMPLE

Two Wildcats in Barton, One in Harvey, Open New Areas

Two strikes in Barton County featured Kansas field activity the past week, a seven-day period that also saw extension wells completed in the Hall and Coralena pools in Russell County, the Wilkens pool in Ellsworth County and the South Trapp area in Barton County. Other completions included a deep pay discovery in the Greenvale pool in Russell County, a small wildcat producer in Butler County and a 4,022-bbl. well in the Zenith field, Stafford County. A Misener sand pool was opened in Harvey County.

A. G. Kaiser and associates apparently had opened a new oil area in Barton County at No. 1 Hagen, SW cor. Section 20-20-11w, 4 miles south of Ellinwood. It was due to be drilled in after fluid rose 250 feet in the hole in less than one hour after drilling plug in 7-inch casing set at 3,321 feet. It topped Arbuckle lime at 3,321 feet, and had spotted saturation in cores at 3,320-23 feet, total depth 3,326 feet. Location is on a farmout from Stanolind Oil & Gas Co. to Kaiser and Alden Branine, who made a deal with Clyde Pulse, Henry Gerbrand and Sam Schneider to drill the well. Nearest production is 2 miles northward in the Ellinwood pool.

Sinclair Prairie Oil Co. No. 1 Prusa, SE cor. Section 20-16-11w, 3 miles south of the Davidson pool and about 3 miles northwest of the Kraft pool, was the other prospective Barton County pool opener. It found Arbuckle lime at 3,235 feet, total depth 3,252 feet, and 7-inch casing was set at 3,235 feet. Oil rose 3,000 feet in the hole within four hours after plug was drilled. The crew was cleaning out preparatory to completion. The Sinclair Prairie company has a block of 8,640 acres in the township, but the well was drilled on a communitized block in which the Shell, Continental and Cities Service companies also are interested.

E. K. Carey and Derby Oil Co. No. 1 Jones, CEL NE NW Section 7-22-1w, prospective Misener sand pool opener in Harvey County, was due for production test. It found Misener sand at 3,278-89 feet. It topped Arbuckle lime at 3,440 feet, drilled to total depth of 3,546 feet and plugged back to 3,279 feet, where 5-inch casing was set. After drilling plug oil rose 1,300 feet in the hole overnight. Capacity production was estimated at 240 bbls. of oil daily. Gravity of the oil was 39 degrees. W. E. McPherson and Paul W. Fleeger, operators, and Hugh McClellan, geologist, are associated with Carey and Derby in this wildcat. Location is about midway between the Graber and Sperling pools.

Wildcat Activity

Stewart & Gross No. 1-A Semisch, NW SE SW Section 24-27-7, wildcat in the Keighley district, Butler County, topped Mississippi lime pay at 2,788 feet and was completed at 2,800 feet, total depth. It pumped 15 bbls. of oil and 30 bbls. of water in 24 hours.

A failure was recorded at Z. Dunlap No. 1 Warren Mortgage, NW NW SW Section 4-28-10, Greenwood County wildcat. It was dry and abandoned at 2,224 feet, total depth.

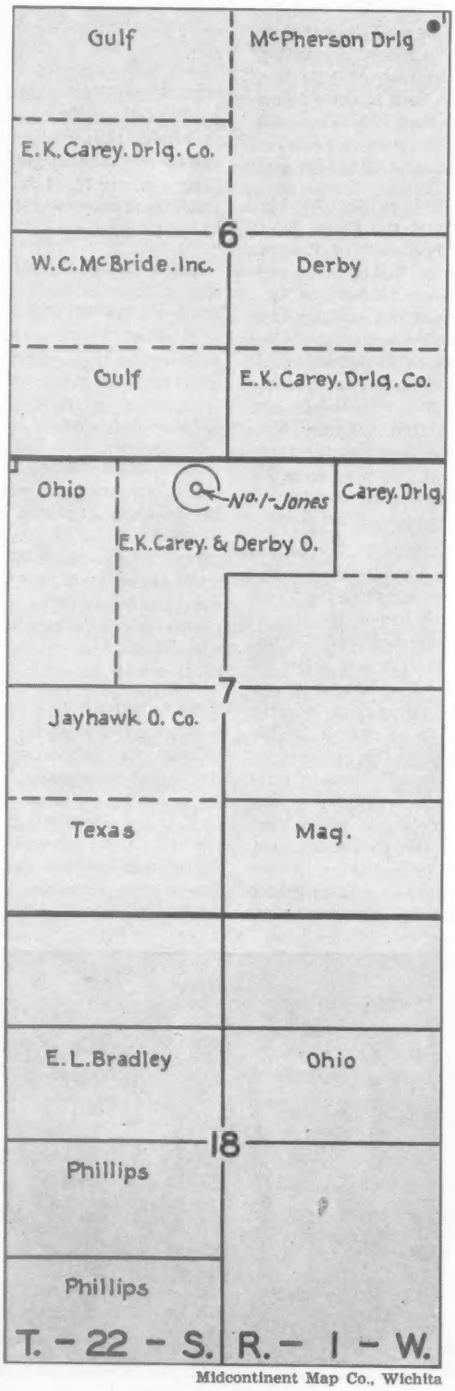
Monarch Royalty Co. No. 1 Central Life, SE NW NW Section 29-26-14, wildcat in Woodson County, found Mississippi lime at 1,501 feet and was dry and abandoned at 1,514 feet, total depth.

New wildcats starting in Kansas include the following:

Barnsdall Oil Co. No. 1 Snodgrass, NW NW SE Section 36-30-6, in Cowley County, was moving in material. It is 5 miles east of the Eastman pool, nearest production, Mississippi lime was to be tested.

Simpson & Estes No. 1 fee, SE NE NE Section 30-27-7, Butler County, was moving in machine. It is on a farmout from National Refining Co., and is 2½ miles northeast of the McCullough pool.

H. L. Turner had spudded at No. 1 Black, SE NE NW Section 3-27-13, Greenwood County outpost.



Midcontinent Map Co., Wichita

E. K. Carey and Derby Oil Co. have opened a Misener sand producing area in Section 7-22-1w, in Harvey County, south of the Graber pool

Higgins & Pierce No. 1-A Shrieves, NE NW SE Section 22-26-4, south of Towanda in Butler County, was rigging up machine.

Garden Production Co. No. 1 Werner, NE cor. Section 10-21-9w, northwest of Sterling in Rice County, was drilling below 1,550 feet.

C. L. Carlock No. 1 Phillip, SE SW NE Section 10-15-17w, northeast of the Madden area in Ellis County, was moving in material.

J. M. Edwards was rigging up machine to deepen No. 1 Detrick, NW NW SE Section 21-14-15, an old wildcat in Osage County, bottomed at 1,200 feet.

Estimated Daily Production

Estimated daily production for Kansas for the week ending December 3, and for the preceding week was as follows:

	Barrels	
	Dec. 3	Nov. 26
Oxford City	1,050	1,075
Burrton	8,125	9,100
Ritz-Canton	4,075	4,225
Graber	2,025	3,825
Hollow-Nikkel	1,625	1,975
Lerado	700	925
Voshell	1,950	1,825
Wellington	2,100	2,125
Ellsworth County:		
Lorraine	1,875	2,200
Other pools	1,290	1,565
Rice-Barton counties:		
Bloomer	1,975	2,050
Chase	4,275	4,675
Geneseo	3,100	3,950
Raymond	850	925
Silica	9,750	10,225
South Silica	1,275	2,000
Keesling	1,175	800
Wherry	3,175	3,800
Miscellaneous Barton	5,670	6,075
Miscellaneous Rice	5,555	6,045
Russell County	21,295	20,100
Sedgwick County	3,850	3,975
Ellis County:		
Bemis	4,325	4,425
Miscellaneous	3,750	3,895
Kingman County	645	615
Stafford County	4,620	4,400
Greenwood County	8,950	9,350
Butler County	19,500	19,575
Other fields	19,800	20,280
Total Kansas	148,350	156,000

Stafford County

J. E. Crosbie, Inc., No. 6 Johnson, NE NW SW Section 13-24-11w, Zenith field, Stafford County, topped Misener sand at 3,800 feet and was bottomed at 3,822 feet. It flowed 104 bbls. of oil in four hours, making a potential of 1,028 bbls.

E. H. Moore, Inc., No. 8 Johnson, SE SE SW Section 13-24-11w, flowed 149 bbls. of oil in four hours, making potential of 1,574 bbls., from Misener sand found at 3,795 feet, total depth 3,814 feet.

Pure Oil Co. completed the largest Kansas producer of the week at its No. 12 Krey, SE NW SE Section 14-24-11w. Misener sand was topped at 3,787 feet, total depth 3,809 feet, and it flowed 247 bbls. of oil and 74 bbls. of water in four hours, making potential of 4,022 bbls. of oil.

Stanolind Oil & Gas Co. No. 5 Mamie Volker A, C N half S half NE Section 23-24-11w, had potential rating of 910 bbls. daily, after flowing 116 bbls. of oil in four hours. Production was from Misener sand at 3,789 feet, total depth 3,803 feet.

New work in Stafford County: Stanolind Oil & Gas Co. No. 3 Siefkes, SW SW SE Section 34-21-12w, South Sittner pool, location; J. E. Crosbie, Inc., No. 8 Johnson, NE NE SW Section 13-24-11w, Zenith, cellar; Stanolind Oil & Gas Co. No. 2 Hartnett, SE SW NW Section 13-24-11w, rigging up rotary; Sinclair Prairie Oil Co. No. 8 Krey, SW SE NE Section 14-24-11w, building rotary rig; Stanolind Oil & Gas Co. No. 5 Mamie Volker B, SW cor. Section 14-24-11w, rotary rig; Barnsdall Oil Co. No. 1 Wallace, NW NW NE Section 24-24-11w, cellar. The last mentioned well is the Barnsdall company's first operation in the Zenith

pool. It is on the east side of the field, and is offset by the E. H. Moore, Inc.-O'Haver lease on the north and the Derby Oil Co.-McComb lease on the west.

Russell County

Jones & Shelbourne No. 1 Kuhnle, NW NE SW Section 4-15-12w, opened a new producing horizon in the Greenvale pool, Russell County. It topped Arbuckle lime at 3,282 feet, total depth 3,288 feet, was acidized and pumped 394 bbls. of oil in 24 hours, cutting 6 per cent water. It is one location west of production. Other wells in the pool produce from Lansing lime at around 3,045 feet.

Western Kansas Oil & Refining Co. No. 1 Keil, SE NW NW Section 6-15-13w, extended the Hall pool one-half mile southward. It topped Lansing lime at 2,903 feet, total depth 2,972 feet, and plugged back to 2,912 feet. It was acidized, pumped 274 bbls. of oil in eight hours and made potential of 822 bbls. of oil, with 300 bbls. of water. Location is on a farmout from Ohio Oil Co.

Coralena Oil Co. No. 1 Siegfried, NW cor. Section 16-15-13w, was the third extension well in Russell County to be completed the past week. It found Lansing lime at 3,050 feet, had pay at 3,121 feet and was bottomed at 3,126 feet, making potential of 1,635 bbls. of oil in 24 hours after acid treatment. It is one-fourth mile east of the Coralena pool.

The following new operations in Russell County were reported: Cities Service Oil Co. No. 2 Carter, C N half N half NE Section 29-14-13w, West Letsch area, location; Crown Petroleum Co. No. 2 Krug, NW cor. Section 26-14-14w, Gurney pool, cellar; Stanolind Oil & Gas Co. No. 2 Roesner, SW cor. Section 9-15-13w, Coralena pool, location; Cities Service Oil Co. No. 3 Ochs, SW SW NE Section 23-15-14w, Trapp field, building rig; Mid-Continent Petroleum Corp. No. 1 Ochs, NW SW NE Section 35-15-14w, West Trapp area, location.

Ellsworth County

C. E. Ash and others No. 1 Wilkens, SE SE NW Section 13-17-10w, extended the Wilkens pool in Ellsworth County one-half mile northwestward. It topped Arbuckle lime at 3,254 feet, had best pay at 3,279 feet and was bottomed at 3,282 feet. It pumped 127 bbls. of oil in eight hours and made potential of 381 bbls.

Continental Oil Co. and others No. 1 Rolfs, NE cor. Section 28-17-8w, Edwards pool, had Arbuckle lime at 3,204 feet, total depth 3,250 feet, pumped 554 bbls. of oil in eight hours and made potential of 1,662 bbls.

Transwestern Oil Co. and others No. 2 Cain-Stumps, NW NW SW Section 33-17-10w, Stumps pool, pumped 699 bbls. of oil in eight hours and made potential of 2,098 bbls. Top of Arbuckle lime was 3,248 feet, total depth 3,271 feet.

Barton County

The Lansing lime producing area of the South Trapp district in Barton County was extended one-half mile southeastward at Shell Petroleum Corp. No. 4 Ehrlich A, SE SE NW Section 18-16-13w. On completion test it pumped 385 bbls. of oil in eight hours and made potential of 2,506 bbls., after acidizing. It missed Arbuckle lime and was bottomed at 3,347 feet in granite. Operators plugged back and perforated casing at 3,105-20 feet. Lansing lime was topped at 3,097 feet, granite 3,325 feet. The well is one location south of Arbuckle lime production, the principal pay at Trapp being in that formation.

Shell Petroleum Corp. No. 6 Stettinger, SE SW SE Section 1-16-14w, Trapp field, topped Arbuckle lime at 3,321 feet, was bottomed at 3,343 feet, and pumped 15 bbls. of oil daily.

C. L. Carlock No. 1 Musenberg, NW NW SE Section 1-19-11w, Rick area, was an abandoned rig.

Lario Oil & Gas Co. and Indian Territory Illuminating Oil Co. No. 3 Zahorsky A, SW NW NE Section 23-20-11w, on the west side of the South Silica pool, pumped 504 bbls. of oil in eight hours and made potential of 1,512 bbls. of oil from Arbuckle lime topped at 3,271 feet, total depth 3,282 feet.

New activity in Barton County: Tom Palmer No. 1 Polzin, NE SE SW Section 4-16-12w, North Beaver pool, building rotary rig; T. C. Johnson No. 8 Bitter, NW cor. Section 8-16-13w, South Trapp, location; Shell Petroleum Corp. No. 2 Luerman, NE NE SW Section 18-16-13w, building rotary rig.

Sedgwick County

Ace Oil Co. No. 1 Lennery, NE NE NW Section

(Continued on Page 82)

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(For Shallow Wells)

Southwest Texas District

By
F. L. SINGLETON

Gas in Laguna Madre Bay; Promising Fault Line Tests

CORPUS CHRISTI, Tex., Dec. 5.—The opening of a gas field in Laguna Madre Bay offshore from Kleberg County, extensions to proven fields, and the testing of a promising wildcat in the Balcones Fault Line district were the outstanding developments in the Southwest Texas district the past week.

Pure Oil Co. and Superior Oil Co. No. 1 State, 10 miles south of the Flour Bluff field, and offshore from Kleberg County, has been completed as a gas well after casing had been reperforated at 7,210-30 feet, 7,239-56 feet and 7,269-78 feet. The well is flowing through a 10/64-inch choke, making an estimated 1,900,000 feet of gas with a slight trace of distillate. This well was drilled to a total depth of 9,636 feet and 9⅝-inch casing was cemented at 7,617 feet.

The South Alice field, Jim Wells County, was extended about a mile northeast with the completion of Tom Graham and others No. 1 Bankers Mortgage Co., which flowed 45 bbls. of 42-gravity oil in 14 hours through a 3/32-inch choke, with tubing pressure 1,580 pounds and shut-in casing pressure 2,100 pounds. The hole is bottomed at 5,402 feet, and the well is flowing through perforated casing at 5,233-39 feet. The well is a southeast offset to Mosser and others No. 1 Presnall, a gas well in the 3,400-foot horizon.

Samfordyce Field

Additional development on the north flank of the Samfordyce field, Hidalgo County, was indicated following the completion of Phillips Petroleum Co. No. 1 Flores, one-quarter mile from production, which is flowing gas and a slight amount of distillate from a new sand. The well was drilled to a total depth of 9,708 feet, and is testing through perforated casing at 5,840-5,900 feet. In the same county and in the Mercedes field, Union Sulphur Co. No. 11 American Rio Grande Land & Irrigation Co. has been plugged back to the discovery horizon, where it has been completed as a distillate producer through perforated casing at 7,430-40 feet. The well is located in Tract No. 2341, Section 58, and was drilled to a total depth of 9,618 feet. Numerous tests were made below the present depth and some encouraging showings of oil and gas were logged.

Hewitt & Dougherty No. 1 Rooke, was cleaning into the burning pits, flowing oil and wash water to extend the La Rosa field, Refugio County, approximately 4,000 feet southwest. The well is bottomed at 5,903 feet and is testing through perforated casing at 5,895-5,900 feet. Location is in Section 6, Jose Maria Aldrete League.

Blew Out, Cratered and Burned

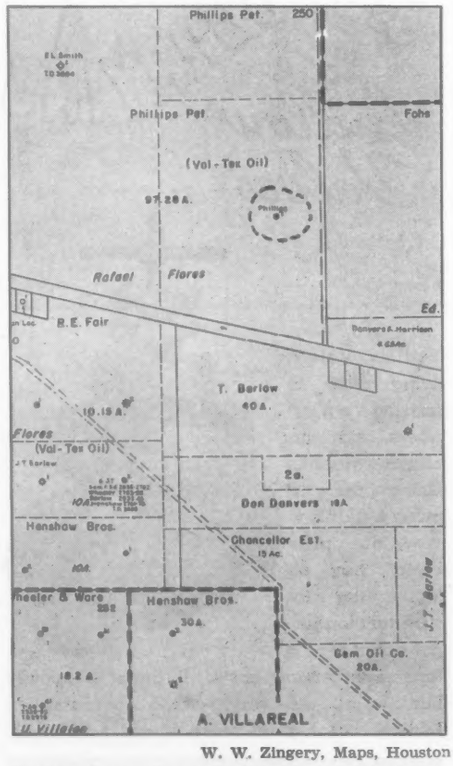
Northwest of the town of Robstown, Nueces County, Seaboard Oil Co. No. 1 E. C. Wilson, Block 9, Vicente Lopez De Herrera Survey, apparently found a new field, but the discovery proved to be a disastrous one for the company, as the well blew out, caught fire and cratered. The blow out occurred while the company was attempting to recover a core at 6,533-41 feet, the total depth. The well began blowing water and mud, and before it could be brought under control it began to crater approximately 100 feet from the derrick floor. It caught fire shortly afterward and the rig and all other drilling equipment were lost in the crater. The flames indicated that the well was making considerable oil. The hole bridged December 1, and the fire was extinguished. Several gas sands had been logged at intervals from 4,200 to 5,200 feet.

The Sun field, Starr County, was extended approximately a half mile north by the completion of Circle Oil Co. No. 1 Olivarez, Section 241, C.C.S.D.&.R.G.N.G. Survey. The well was drilled to 5,150 feet, and is being tested in a new sand through perforated casing at 5,117-19 feet. The well is flowing through a quarter-inch choke, flowing pipe line oil and wash water under a tubing pressure of 400 pounds and casing pressure 1,275 pounds. This well logged several sands, all of which are capable of producing. Offsetting this well to the east, location has been made for No. 2 Olivarez, while Sun Oil Co. has started drilling operations on its No. 2 McKinney, a south offset to the Circle producer, and at No. 1 Montalvo 1 mile northwest of production in the Los Retaches Survey.

To the north and across the line in Jim Hogg County, Humble Oil & Refining Co. No. 3 Kelsey Bass, perforated casing at 4,730-35 feet, and tested 200 bbls. of fluid of which 20 to 50 per cent was salt water. The perforations have been squeezed off and the casing is to be reperforated. A drill stem test of this section showed favorable results. The rig from this test will be moved 1,860 feet west of the discovery well for No. 4 Kelsey Bass. Southwest of the field, Navarro Oil Co. has started drilling operations at No. 1 J. Garcia.

Deep Sand Extended

The 4,800-foot sand, recently proven productive on the extreme west side of the Sweden field, Duval County, was being extended approximately 1 mile south by Longhorn Drilling Co. and others No. 1 Miller, Santos Flores grant No. 25. Sand, showing oil, was cored at 4,893-99 feet and on a drill stem test, 1,530 feet of pipe line oil was recovered and the pressure built up to 200 pounds. The well was drilled on a 160-acre lease, farmed out by the Hiawatha Oil & Gas Co. This is the second oil well completed on the west side of the field and the completion promises to revive drilling. Previous development had resulted in distillate production in the Cockfield below 6,000 feet.



W. W. Zingery, Maps, Houston

Phillips Petroleum Co. No. 1 Rafel Flores, one-quarter mile north of Samfordyce field, Hidalgo County, which is flowing gas and distillate from a new sand

Southwest of Freer, and 1 mile south of the Moca field, Magnolia Petroleum Co. was running casing, and will test a shallow sand logged in No. 1 Duval County Ranch Co. Sand was cored at 698-704 feet, total depth, and 7-inch casing was cemented at 698 feet.

Fred Pederson and others No. 1 Brown, an Edwards lime test in the Tangleford area, Lee County, was scheduled to be tested during the week. The hole is bottomed at 6,404 feet with 7-inch casing cemented at 6,380 feet. Eight inches of soft lime showing oil and gas was recovered in a core at 6,399-6,401 feet. Location is in the David Hudson Survey.

In Bastrop County, Paul Texas and others No. 1 Grizzard is expected to be abandoned after it swabbed salty sulfur water after perforating the casing at 7,023-30 feet which is near the top of the lime section. The test was taken over by the Continental Oil Co. after previous test in the lower section tested sulfur water.

In the Schattel area, Frio County, Humble Oil & Refining Co. abandoned No. 1 Houston and others at a total depth of 5,302 feet. Several tests in the Edwards lime section showed oil and sulfur water. The company is moving the rig 1 mile to the northeast for No. 2 Houston, Section 161, Kiefer Survey. It will also be drilled to the Edwards lime.

SOUTHWEST TEXAS COMPLETIONS

(24-hour production)

Bee County

Tulsite field: Herbert Aid and others No. 2 Emogene Hall, 3,574 feet, abandoned.

Caldwell County

Salt Flat field: Martel Petroleum Co. No. 3-A Smith, 2,700 feet, 47 bbls. oil, 5 bbls. of water, pumping.

Calhoun County

Heyser field: Humble Oil & Refining Co. No. 4 Vandenberge, 5,592 feet, gas well.

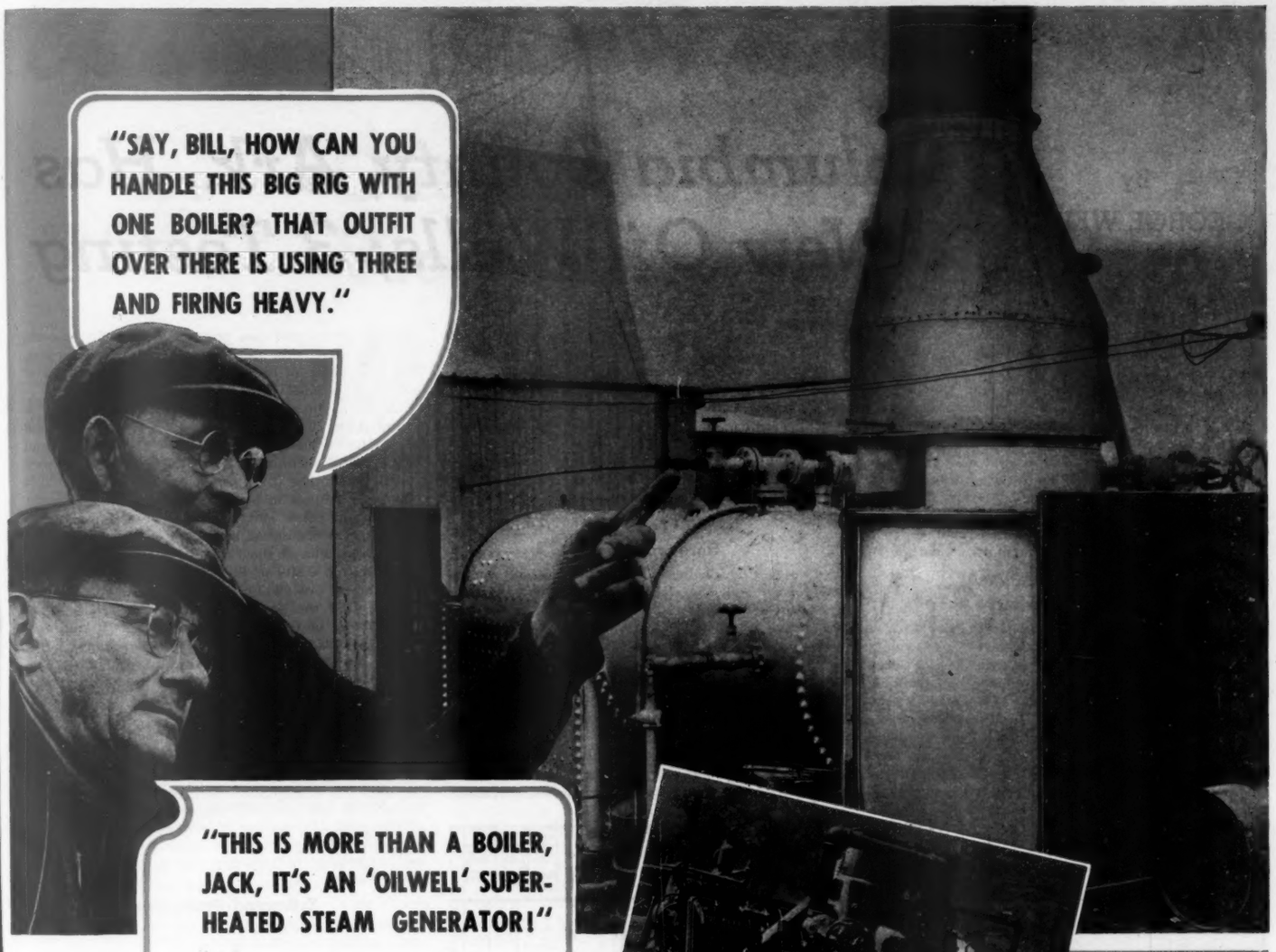
Guadalupe County

Darst Creek field: Diamond Half Oil Corp. No. 1 Neighbors, 2,550 feet, 154 bbls. oil, 10 bbls. water, pumping.

Duval County

Benavides field: Arkansas Fuel Oil Co. Na. 5 Wolfe, perforated casing 5,365-76 feet, 248 bbls., quarter-inch choke. Hiawatha Oil & Gas Co. No. 19 Parr, perforated casing 4,732-36 feet, 96 bbls., 5/32-inch choke. Casa Blanca field: Magnolia Petroleum Co. No. 13 Duval County Ranch Co., 2,002 feet, abandoned. Transwestern Oil Co. No. 14 Duval County Ranch Co., sand 1,161-69 feet, 125 bbls., half-inch choke; No. 15 Duval County Ranch Co., sand 1,173-76 feet, 50 bbls., pumping. Driscoll field: Continental Oil Co. No. 29-A Driscoll, sand 3,361-70 feet, 196 bbls., quarter-inch choke. Eagle Hill field: W. E. Butler No. 11-B Foster, sand 1,490-1,500 feet, 65 bbls., pumping. Magnolia Petroleum Co. No. 8 Duval County Ranch Co., sand 1,477-89 feet, 50 bbls., pumping. Fitzsimmons field: Collins & Porter No. 4 Fitzsimmons, perforated casing 4,368-78 feet, 64 bbls., 12 hours, 5/32-inch choke. H. J. Porter No. 6 Driscoll, perforated casing 4,361-69 feet, 128 bbls., 9/64-inch choke. Sun Oil Co. No. 5 Brueggemann, perforated casing 4,302-10 feet, 253 bbls., quarter-inch choke. Hoffman field: Cox & Hamon and others No. 53 Cuellar, sand 2,578-96 feet, 65 bbls., half-inch choke, jetting. Magnolia Petroleum Co. No. 19 Weil, sand 2,775-92 feet, 35 bbls., pumping. Rowan

(Continued on Page 91)


"SAY, BILL, HOW CAN YOU HANDLE THIS BIG RIG WITH ONE BOILER? THAT OUTFIT OVER THERE IS USING THREE AND FIRING HEAVY."
"THIS IS MORE THAN A BOILER, JACK, IT'S AN 'OILWELL' SUPER-HEATED STEAM GENERATOR!"

"Oilwell" Portable Superheated Steam Generator with "Oilwell" Feedwater Heater-Pump Unit (hidden from view by shed) — a complete and highly efficient oilfield power plant.

(Above) "Oilwell" Vertical Twin Steam Engine driving power slush pump.

(At Right) "Oilwell" direct-driven Rotary Drilling Unit.

AND you'll be surprised, too, when you try out a complete "Oilwell" Steam-Saving Rig for the first time. Every unit saves steam. The new "Oilwell" feedwater heater pump, the engine-driven power pump, the direct-driven rotary and the superheater on the steam generator—all combine to reduce fuel and feedwater consumption to about one-third that of the ordinary rig.

OIL WELL SUPPLY COMPANY

Subsidiary of United States Steel Corporation

Branch Stores in all Oil Fields

"OILWELL"

North Louisiana, Arkansas

By
GEORGE WEBER

Columbia County, Ark., Has 2 New Oil Wells; 3 Testing

SHREVEPORT, La., Dec. 5.—Drilling activity in the Cotton Valley, Magnolia, Shreveport and Joaquin fields of the tri-state area led new development during the past week, with several wildcats in North Louisiana and Arkansas approaching critical depths and attracting considerable attention. The Shreveport field is showing increased activity, with one well being tested over the week-end, and several new operations under way. Cotton Valley interest was directed to a southwest outpost testing the lower Marine. The Magnolia field of Columbia County, Arkansas, is gaining in drilling activity, and the Joaquin gas distillate field of Shelby County, Texas, saw the addition of a fourth well during the week.

Joaquin Gasser

Redditt & Gray No. 2 Pickering Lumber Co., in the W. Snider Survey, a south edge test in the Joaquin gas field of Shelby County, Texas, was testing large quantities of gas and ungauged amounts of distillate, to make the field's fourth producer. Bottomed at 5,139 feet, the well was producing through perforations made at 5,053-60 feet. On a 11/32-inch choke a casing pressure of 1,000 pounds and tubing pressure of 2,000 pounds was gauged, and on open 2½-inch tubing the tubing pressure was 300 pounds and the casing pressure 2,300 pounds. Shut-in casing pressure is 2,500 pounds on the casing and 2,300 pounds on the tubing.

Flowing tests on these various sizes of chokes showed large volumes of gas, estimated at 100,000,000 feet, together with a 55-gravity dark brown distillate. The production had not yet been run through a separator, so the fraction of distillate produced was not known at this writing. This is the fourth well in the Joaquin area, where the Portex Oil Co., owners of the other three wells, are beginning initial operations at a new recycling plant.

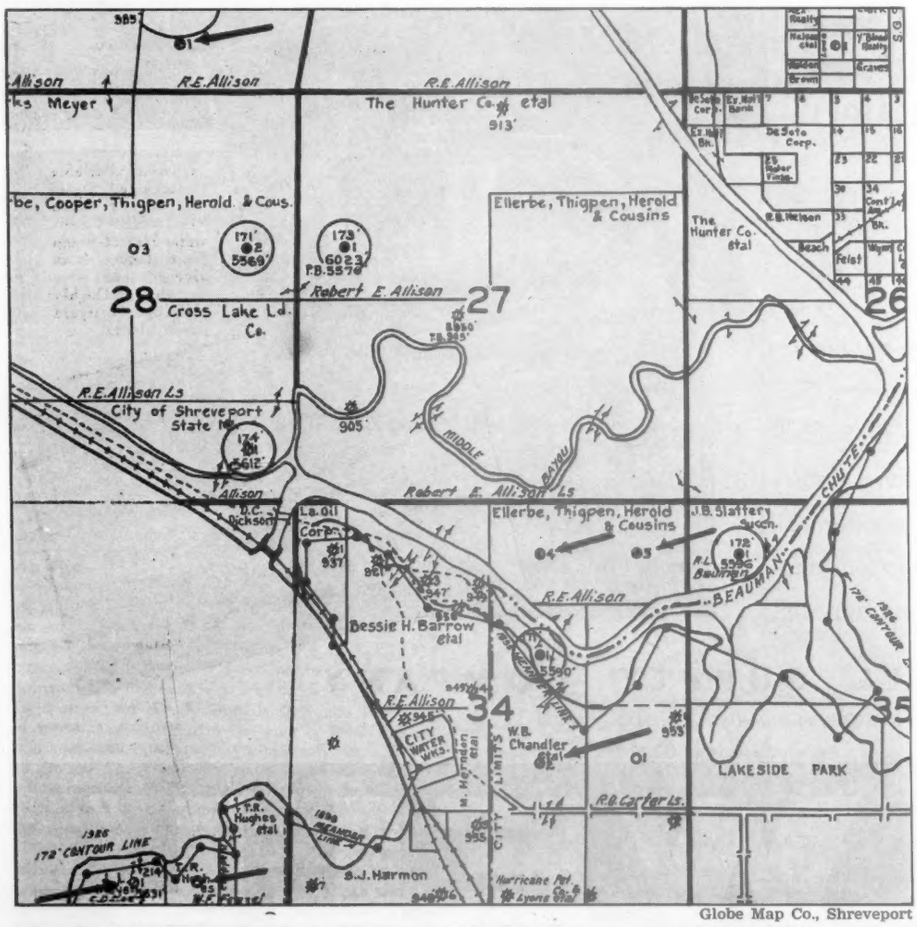
Shreveport Field

Two rigs are being moved into locations in the Shreveport field, and five wells are drilling the area. The most important well currently is the C. D. Loe No. 1 Meyer, SE cor. Section 33-18-14, southwest of present known production limits, and located on the south shore of Cross Lake. The outpost, after testing salt water at 5,602-25 feet, was plugged back and after drilling out to 5,610 feet, operators again perforated at 5,602-08 feet, but tested salt water. Perforations were then shot at 5,553-57 feet, and casing was tested after which perforations were shot at 5,592-98 feet. Tubing was set with a packer at 5,600 feet. Swabbing, which followed, showed increasing amounts of oil and gas, but salt water still showed, and the crew shut down, awaiting further orders. The total depth of the Meyer No. 1 is 5,610 feet, and old depth is 5,631 feet.

A north outpost test, R. E. Allison No. 1 Jones & Mabry Unit, was drilling below 4,100 feet, having topped the stringer anhydrite about 8 feet lower than in the same operator's No. 1 Ellerbe, discovery well of the field. The J. P. Driscoll No. 1 Woolworth, a northwest outpost in SE SE Section 19-18-14 is under way, drilling below surface casing. In addition, Harry Hanbury has begun one test; the Rodessa Oil & Refining Co. has moved the rig over on a second test inside the city limits of Shreveport, and R. E. Allison is beginning two additional tests to his north outpost now nearing the pay formation.

Southeast of the City of Shreveport, the Arkansas-Louisiana Gas Co. No. 1 Webb, in the Lucas area, topped the Pettit lime at 5,616 feet, about 75 feet lower than the Allison discovery well at Cross Lake. The first cores taken in the lime formation showed no porosity, late this week.

In Bienville Parish, the Arkansas-Louisiana Gas Co. No. 1-B Davis Brothers Lumber Co., a Driscoll or Union Church test, found salt water at 7,201 feet and was plugged back to 7,130 feet. Casing was perforated at 6,860-80 feet and 6,900-30 feet and the well was treated with 2,000 gallons of acid, after which it tested salt water. Operators are plugging back to 6,800 feet and arranging to perforate again. Total depth is 7,201 feet.



Globe Map Co., Shreveport

The Shreveport, or Cross Lake field of Caddo Parish, has seven drilling wells and five producers in the Pettit lime. One drilling well, not on map, is in the southeast quarter of Section 19-18-14

Estimated Production

Estimated daily gross production all companies week ending December 3:

NORTH LOUISIANA

	Bbls.
Bellevue	630
Caddo light	4,115
Caddo heavy	2,590
Converse	555
Cotton Valley heavy	95
Cotton Valley light	*10,220
Cross Lake	1,100
De Soto and Red River	1,370
Elm Grove	315
Haynesville	2,985
Holly	85
Homer	2,620
Lisbon	9,725
Pleasant Hill	100
Rodessa	28,135
Sarepta-Carterville	†400
Sligo	685
Sugar Creek	255
Urania	2,675
Zwolle	3,805
Total North Louisiana	72,560

SOUTH LOUISIANA

Buckner	1,255
Champagnolle	1,600
El Dorado	1,800
Lisbon	260
Miller County	370
Nevada	630
Rodessa	4,725
Schuler	16,535
Smackover light	1,990
Smackover heavy	15,500
Stephens	540
Troy	1,050
Urbana	1,140
Village	1,205
Total South Arkansas	48,600

Texas side of Rodessa field 31,140 bbls. daily.
*4,220 bbls. is distillate. †100 bbls. is distillate.

Cotton Valley

In the Cotton Valley field of Webster Parish, one completion was made during the week, in the Bodcaw sand of the lower Marine formation. The Ohio Oil Co. brought in No. 1 Cox, a northwest edge test, for an initial production of 279 bbls. of distillate and an estimated 5,000,000 feet of gas through a three-eighths inch choke in 17 hours. Casing pressure stood at

(Continued on Page 82)

Oklahoma Operations

By
DAL DALRYMPLE

Outpost in Osage Finds Pay; Viola Strike Revives Tyrola

Osage County, largely in the background in Oklahoma activity since the heyday of South Burbank, claimed the spotlight again when a well in the western part of the county blew in with big production of gas and a spray of oil last Saturday, December 3.

It was Olson Oil Co. No. 1 Sodani-Osage, C N half NW NW Section 24-26-4e, west of the Burbank field and east of Kaw City in Kay County. It found top of Burbank sand at 3,097 feet, total depth 3,102 feet, and casing was set at 3,096 feet. When plug was drilled with cable tools gas broke through, cleaned the hole and blew tools up the hole. The line kinked and broke, letting the tools drop back into the hole. Gas was estimated at 7,000,000 feet daily, with considerable oil showing. The crew was bailing at last report.

Other tests are being drilled in that general area, but west of Kaw City and in Kay County.

The Tyrola area in southern Seminole County was revived the past week when Arch Oil Co. No. 1 Collins, NE SE NW Section 4-5-6, found production in Viola lime at total depth of 3,270 feet. This was a new pay for the area. It flowed 420 bbls. of oil in 3 hours and 20 minutes, with gas estimated at 3,000,000 feet daily. No water was showing on initial tests. It was shut in for additional tankage. The well offsets the discovery well in the area, Stanolind Oil & Gas Co. No. 1 Salina, which found water in Wilcox sand and plugged back to Hunton lime at 3,317 feet, to complete for 90 bbls. of oil and 15 bbls. of water daily in December, 1937. Later, the discovery well was abandoned.

Opening of a Misener sand pool in Creek County was indicated at Lease Investment Co. No. 1 Barks, NW SE NW Section 28-14-10, in the Tuskegee-Slick area, southern Creek County. It had Mississippi lime at 2,965-3,214 feet, found Misener sand at 3,242 feet, and 2,000 feet of 34-gravity oil rose in the hole in 16 hours. It was expected to be shot and tested. Misener sand producers have been completed previously elsewhere in the township.

The deepest drilling well in Oklahoma, Continental Oil Co. No. 1 Proctor, C NW Section 28-10-20w, Washita County wildcat, was reported drilling below 10,025 feet and may soon set a new depth record for the state. Originally contracted for 8,000 feet, operators decided to deepen and it may be carried to 12,000 feet. Information on formation tops has not been disclosed.

Another deep wildcat, Carter Oil Co. and others No. 1 Smith, C SE SW Section 26-5-8w, in the old Chickasha gas district of Grady County, was making hole below 5,695 feet and headed for deep pay sought at around 10,000 feet.

Among the Wildcats

The Texas Co. No. 1 Longan, C W half NW NW Section 12-17-1e, wildcat that opened the Coyle pool in southwestern Payne County early last summer, was listed as a completion after long delay. Initial flow was 525 bbls. of oil in 13 hours, but it was shut in for several months awaiting pipe line connections, only being opened up about two weeks ago for further testing and completion. On recent test it flowed 460 bbls. of high-gravity oil through choke in 24 hours. It had first Wilcox sand at 4,874-4,918 feet, second Wilcox sand at 5,203-33 feet, total depth 5,238 feet. Second sand was dry and the well was plugged back to 4,960 feet and drilled out to 4,965 feet, at which depth it was completed. Production was thought to be from the first sand. A showing of oil was reported in Hunton lime at 4,622-82 feet. Top of Viola lime was 4,766 feet.

Summit Drilling Co. No. 1 Gordon, NE cor. Section 27-17-2e, wildcat in Lincoln County, had first Wilcox sand at 4,843 feet, second sand 4,863 feet, total depth 4,898 feet, and was dry and abandoned.

Continental Oil Co. and others No. 1 Donahoe, NW NW SW Section 16-18-2w, Payne County wildcat, topped first Wilcox sand at 5,931 feet, second sand 6,007 feet, and was dry and abandoned at 6,023 feet, total depth.

A gas area southeast of Newkirk and west of the Mervine area was opened in Kay County at Gus T. Little No. 1 Prunty, NE NE SW Section 33-28-3e. It was bottomed at 319 feet and produced 3,200,000 feet of gas, initially.

Atlantic Refining Co. No. 1-A Watson, SE SE NW Section 28-28-1w, Kay County wildcat, south of South Braman, was dry and abandoned at 3,701 feet, total depth.

L. W. Winkler and Son No. 1 Chapman, SE SE NE Section 23-4-6w, wildcat northwest of the Knox pool in Grady County, was rigging up rotary.

Wood Oil Co. No. 1 Peters, SW SE NW Section 28-8-4, wildcat north of the St. Louis field in Pottawatomie County, had dug cellar and pits.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ending December 3, and for the preceding week was as follows:

	Barrels	
	Dec. 3	Nov. 26
Allen	6,625	6,775
Billings	4,450	5,150
Burbank	7,750	7,775
South Burbank	8,875	8,900
Balance Osage	16,500	16,750
Blackwell district	4,125	4,100
Bristow-Slick	6,475	6,625
Chandler	1,900	2,000
Crescent	4,150	3,725
Cromwell	2,950	2,975
Cushing-Shamrock	10,200	10,225
Duncan district	4,500	4,150
Edmond	4,675	4,825
Fish	3,150	3,100
Fitts	35,800	36,750
Jesse	2,100	2,225
Graham-Fox	4,300	4,375
Gray	900	875
Healdton	9,725	9,650
Hewitt	3,625	3,650
Keokuk	3,900	3,925
Konawa	1,175	1,200
Lucien	8,275	8,200
Moore	4,275	4,750
Oklahoma City	77,550	104,375
Olympic	3,850	3,950
Ramsey	2,550	2,450
Sasakwa	1,250	1,325
Sholem-Alechem	2,275	2,475
Seminole district:		
Bowlegs	8,025	8,250
Carr City	3,050	3,150
Dora	4,525	4,675
Earlsboro	4,250	4,500
South Earlsboro	525	550
East Earlsboro	4,025	4,175
Little River	6,175	6,275
East Little River	825	800
Maud	550	550
Mission	1,225	1,275
Seminole	7,725	7,950
East Seminole	1,600	1,600
Searight	2,500	2,575
Total Seminole	45,000	46,325
St. Louis-Pearson	27,000	26,250
Tatums	1,950	2,425
Tonkawa-Garber-Thomas	4,000	4,025
Wewoka	2,200	2,150
Yale-Jennings	3,775	3,725
Other pools	85,750	85,000
Total Oklahoma	417,550	447,150

Pottawatomie County

Magnolia Petroleum Co. No. 3 Tull-Fyke C. SW SE SE Section 20-7-5, St. Louis field, Pottawatomie County, topped pay at 2,847 feet, total depth 2,856 feet, and flowed 150 bbls. of oil in 24 hours through tubing.

Alma Oil Co. No. 1 Youts, SE SW SW Section 28-7-5, pumped 150 bbls. of oil and 400 bbls. of water in 20 hours from dolomite pay found at 4,090 feet, total depth 4,116 feet.

Gulf Oil Corp. No. 2 Johnson, SW SE NW Section 29-7-5, topped dolomite at 4,023 feet, was bottomed at 4,117 feet, and pumped 316 bbls. of oil and 15 bbls. of water in 24 hours.

Deep Rock Oil Corp. No. 6 Tolan, SW SE SW Section 30-7-5, pumped 79 bbls. of oil in 24 hours from pay found at 4,148 feet, total depth 4,200 feet.

Alma Oil Co. No. 4 Smith, SE SW NE Section 32-7-5, was completed at total depth of 4,039 feet, pumping 535 bbls. of oil in 24 hours from pay found at 4,018 feet.

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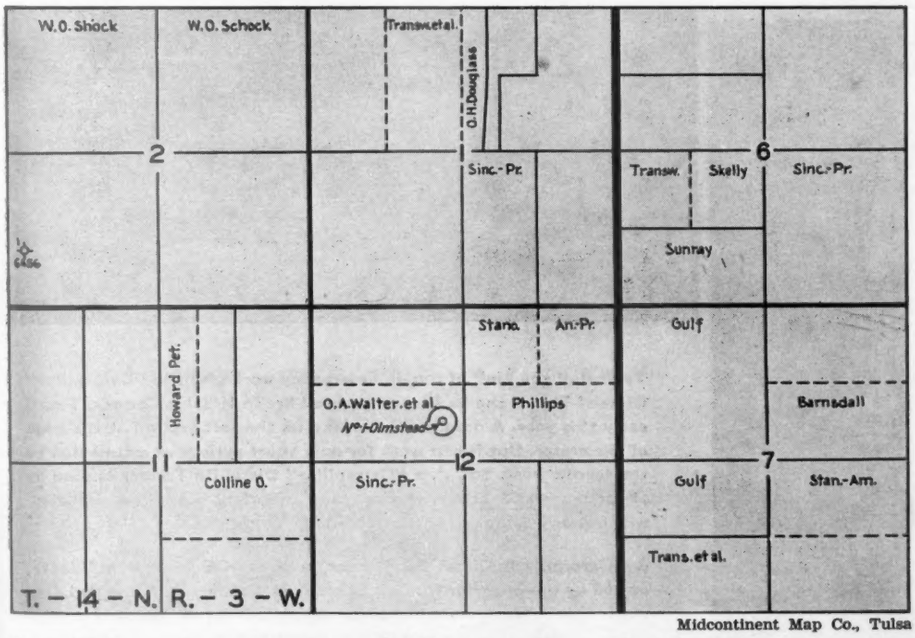
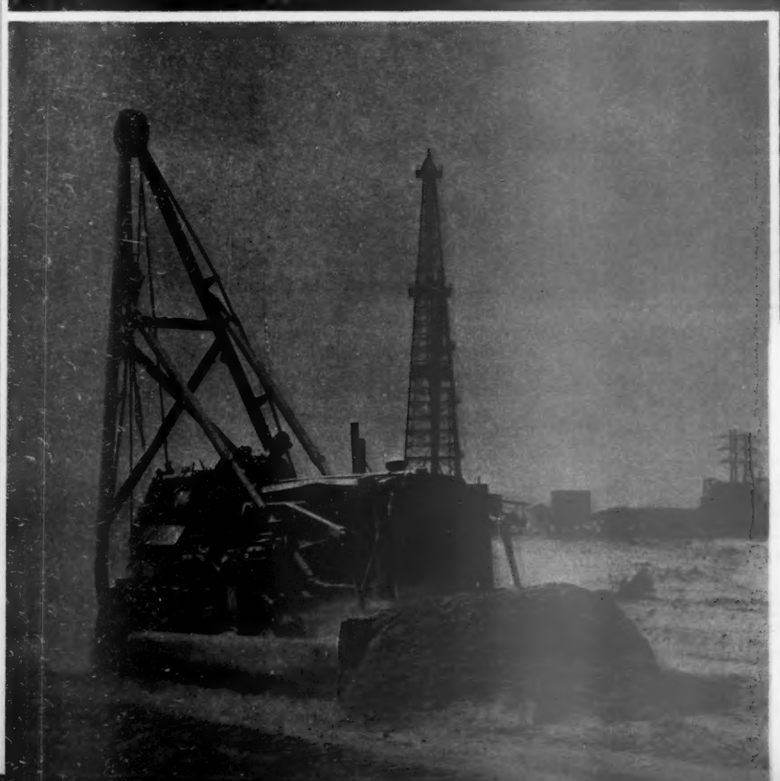


Midcontinent Map Co., Tulsa

O. A. Walter and associates have started work at No. 1 Olmstead, wildcat due to test Wilcox sand north of the town of Edmond, Oklahoma County

THEY'RE JUST AS *Tough*



Typical of the kind of tough, emergency work given to "Caterpillar" Diesels! This is the La Blanca gas-well fire in Hidalgo County, Texas, early this year. A dragline is working on the soft ground at the edge of the crater. But it can work for only short periods at a time due to the terrific heat. So . . . a "Caterpillar" Diesel D8 Tractor is used as an anchor—and brings the dragline to safety every few minutes, without any delay!

A "Caterpillar" Diesel D8 Tractor, with a K-B Master bulldozer, owned by the Superior Oil Co., Bakersfield, California. Front and rear power, here. The tractor and dozer are cleaning and leveling a drum-site . . . without any wasted time. When this is done, the winch on the rear—powering a home-made boom—will go to work spotting heavy equipment.

AS YOU NEED THEM!

A winch-equipped "Caterpillar" Diesel D7 Tractor owned by the Loffland Bros. Co., Basile, Louisiana. Here is an outfit that can do its own loading—with the winch exerting almost twice as much power as the tractor's drawbar pull! Teamed with an Athey wagon, the D7 will have this boiler spotted in a hurry . . . and spotted right where it's needed!

JOBS don't come any tougher than oil-field jobs. And tractors don't come any tougher than "Caterpillar" Diesels! Here's strength of design and stamina of steel to drive the work through *to a finish.* And the work can be anything from fighting a fire to spotting a boiler!

All over the United States, all over the world, "Caterpillar" Diesel Tractors and "Caterpillar" Diesel Engines are handling—*at a profit*—the most difficult and strenuous oil-field duties. Because no matter how tough the job is, "Caterpillar" Diesels are just as tough! *They're money-makers at anything.*

And when the need for replacements arises, the "Caterpillar" organization maintains—for your convenience and profit—the most widely spread, most complete parts-and-service facilities in the world!

FIVE TRACTOR SIZES . . . 25 TO 95 DRAWBAR HORSEPOWER
NINE ENGINE SIZES . . . 32 TO 160 HORSEPOWER

CATERPILLAR

TRACTOR CO., PEORIA, ILLINOIS

DIESEL ENGINES • TRACK-TYPE TRACTORS • ROAD MACHINERY

Trigg & Alma Oil Co. No. 2 Rhodd, SE NW SE Section 32-7-5, topped pay at 4,112 feet, was bottomed at 4,125 feet, and pumped 285 bbls. of oil and 140 bbls. of water in 24 hours.

Watchorn Oil & Gas Co. No. 1-A Coleman, St. Louis field, topped pay at 4,050 feet, total depth 4,081 feet, and pumped 256 bbls. of oil and 125 bbls. of water in 24 hours.

Ray Stephens No. 1 Zoeller, NE SE SW Section 5-6-5, St. Louis area, was a location. Sam K. Vierson No. 2 Rhood, NW NE SW Section 32-7-5, had dug cellar and pits.

Seminole County

Hall-Troup & Moore No. 1 Damron, NW NW SW Section 3-6-6, Dora pool, Seminole County, flowed 100 bbls. of oil in the first 24 hours and was completed at 2,827 feet, total depth. Top of pay was 2,740 feet.

Atlantic Refining Co. and Texas Co. No. 1 Howell, NE SW NW Section 22-6-6, Traugh area, was dry and abandoned at 3,514 feet, total depth.

Thompson Brothers No. 1-A Ludey, NE NW NW Section 34-7-6, Little River district, found top of sand at 2,705 feet, total depth 2,965 feet, plugged back to 2,725 feet and produced 1,500,000 feet of gas.

Wood Oil Co. No. 1 Cameron, SE SW NE Section 2-8-6, Seminole field, topped pay at 4,130 feet, total depth 4,158 feet, and pumped 174 bbls. of oil in 24 hours.

Rogers & Rogers No. 1 Ford, SW NE SE Section 36-8-7, found Booch sand at 3,186 feet, was bottomed at 3,209 feet and pumped 35 bbls. of oil in 24 hours.

McQueen and others No. 8 Bruner C, SE SE NE Section 4-6-6, Dora area, had Booch sand at 2,930 feet, total depth 2,995 feet, was shot and produced 144 bbls. of oil in 24 hours.

Three new operations in Seminole County were reported. Rogers & Rogers No. 2 Robison, NW SE SE Section 36-8-7, was a derrick. Winona and others No. 1 Willmott, NW NW SW Section 8-9-6, East Earlsboro area, was a cellar. Rogers & Rogers No. 1 Aldridge, SW SW SE Section 25-7-5, was drilling.

Pontotoc-Hughes Counties

Manahan Oil Co. and others No. 1 Clark, SW SW SE Section 26-5-7, Allen district, Pontotoc County, was dry and abandoned at 2,360 feet, total depth.

Olson Drilling Co. No. 1-A Estep, Hughes County test, topped Gilcrease sand at 2,993 feet, total depth 3,477 feet, and produced 7,000,000 feet of gas.

Davon No. 1 Wesley, SE SE NW Section 5-8-10, Hughes County, was abandoned at 3,217 feet, total depth.

Phillips Petroleum Co. No. 19 Norris, NE NE SW Section 25-2n-6, Fitts field, Pontotoc County, had dug cellar and pits. Stanolind Oil & Gas Co. No. 3 Norris E, NE SW SE Section 25-2n-6, an old Fitts well bottomed at 4,284 feet, was rigging up standard tools to deepen.

Lincoln-Okfuskee Counties

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 James, Wilzetta pool, Lincoln County, had Hunton lime at 4,213 feet, total depth 4,214 feet, and flowed 731 bbls. of oil in 24 hours, cutting 10 per cent water. Gas gauged 2,000,000 feet.

Wilcox Oil & Gas Co. No. 3 Saylor, SW NW NW Section 14-14-6, Sac and Fox pool, Lincoln County, topped Prue sand at 2,860 feet, total depth 2,967 feet, was shot and flowed 95 bbls. of oil in 24 hours

Shell Petroleum Corp. No. 5 Johnston, SW NE NE Section 11-11-8, Dill pool, Okfuskee County, topped Cromwell sand at 3,335 feet, was bottomed at 3,371 feet, and flowed 130 bbls. of oil in 24 hours, with 1,250,000 feet of gas.

Creek-Okmulgee-Muskogee

Strozier Drilling Co. No. 2-A Ricks, SW SE NW Section 12-16-11, Creek County, had a hole full of water and was abandoned at 2,729 feet, total depth.

Frierson & Krickner No. 3 Morton, NE SE SE Section 27-14-10, Creek County, pumped 40 bbls. of oil in 24 hours after a shot and was completed at 3,277 feet, total depth.

Commercial Drilling Co. No. 2-B Parks, C W half NE NE Section 35-15-12, Okmulgee County, found Bartlesville sand at 1,597 feet, total depth 1,610 feet, was shot and produced 1,250,000 feet of gas.

Swick Oil Co. No. 6-A Larney, NW SW NW Section 28-15-14, Okmulgee County, had Booch sand at 1,662 feet, was bottomed at 1,692 feet, and pumped 5 bbls. of oil in 24 hours.

Macon & Heydrick No. 1 Pugh, NW NE NW Section 22-13-19, Muskogee County, was completed for 2,500,000 feet of gas at total depth of 640 feet in sand.

New work in Okmulgee County: Briscoe & McGuire No. 1 Gill Estate, NW NE NW Section 1-13-12, shut down at 100 feet; Berry Brothers No. 1 Halsell, NE SW NE Section 18-14-12, rigging up machine; M. E. Craig No. 5 Cover, NW SW NE Section 25-14-14, rigging up machine; Bryan Petroleum Co. No. 1-A Davis, NE cor. Section 21-15-11, drilling below 500 feet; Royal Oil & Gas Co. No. 9 Johnson, NW NE NE Section 29-15-14, drilling below 1,120 feet.

First reports of Muskogee County tests: Wirick & Weimer No. 1 Dixon, SE NW NW Section 3-13-16, drilling below 600 feet; J. R. Parks No. 4 McDaniel, CWL SE SE Section 17-14-19, location; J. M. Loltz No. 8 Ramsey, NW NE SW Section 9-15-18, drilling below 835 feet.

A. Peppis No. 3-A Lee, CEL W half SE Section 12-18-11, Creek County, had spudded.

Osage-Pawnee Counties

Phillips Petroleum Co. No. 32 Osage, C NE SE Section 18-27-6, Osage County, produced 25,000 feet of gas and was completed as a repressure well at 2,996 feet.

Magnolia Petroleum Co. No. 6 Fisher, SE SE NE Section 21-20-6, Pawnee County, was dry and abandoned at 3,485 feet, total depth. It was an old well deepened.

New work in Osage County: Sand Springs Home No. 2 Osage, NW SW NE Section 30-20-11, was a location; Joe Carper No. 9 Osage, SE cor. Section 8-21-9, location; Barnsdall Oil Co. No. 6 Osage, NE SW SW Section 23-24-10, location.

Oklahoma County

Cromwell & Franklin No. 35 Trosper Park, SE SE SW Section 12-11-3w, Oklahoma City field, Oklahoma County, was completed for 13,000,000 feet of gas at total depth of 4,480 feet.

Southwestern Oklahoma

R. O. Ray No. 1 Thelma, NE SE NE Section 6-1s-19w, Tipton pool, Jackson County, was completed as an 81-bbl. pumper at 2,569 feet, total depth.

Carl Carter No. 1 McCasland, NW SW SW Section 3-2s-5w, Velma area, Stephens County, topped sand at 852 feet, total depth 866 feet, and produced 3,000,000 feet of gas daily.

George L. Pace and others No. 15 Payne, NE NW NW Section 28-2s-7w, Comanche pool, Stephens County, was a derrick.

La.-Ark. Fields

(Continued from Page 78)

2,500 pounds and tubing pressure at 2,400 pounds. Total depth of the gas-distillate producer is 8,520 feet. The Holloway sand in the Travis Peak formation was missing in this well.

On the southwest edge, the Oliphant Oil Corp. No. 2-B Stewart, was testing in the Bodcaw formation after setting 7-inch casing at 8,672 feet, with total depth at 8,692 feet.

Interest is again revived in the Sibley-Dubberly area of Webster Parish, with the drilling of the Union Producing Co. No. 1 Walker Unit, 50 feet south of C SE Section 30-18-8. The test is drilling below 3,500 feet.

South Arkansas

The Magnolia, or Kerr-Lynn area of Columbia County is attracting considerable attention among South Arkansas operators, following the completion of two good wells to the south and east of discovery. At the present time two tests are rigging up, and two others drilling for the pay formation in the Smackover lime.

At Village, another field in Columbia County, Standard Oil Co. of Louisiana is on the pay, having topped the lime at 7,366 feet, and set 6-inch casing at 7,436 feet, with total depth at 7,442 feet. The test, No. 1 E. D. Harris, is slated for completion next week.

Buckner, located in northwest Columbia County, also has a Standard Oil Co. well on the pay. The No. 4 McKean, topped the Buckner formation at 6,947 feet, the lime at 7,207 feet and encountered the soft lime at 7,211½ feet. A core taken at 7,212-17 feet showed no recovery, a second core at 7,217-22 feet gave a recovery of 3½ feet of soft saturated lime, and a third core at 7,222-27 feet had a 4-foot 4-inch recovery of the same soft saturated lime. The test is being cored deeper, below 7,248 feet over the week-end.

About 6 miles south of the Village field, the Tide Water Associated Oil Co. and Seaboard Oil Co. No. 1 J. T. Beene cored from 7,997-8,005 feet, recovering 6 feet 7 inches consisting of 5 feet of red sand and 1 foot 7 inches of red shale. Arrangements were made to drill ahead below 8,005 feet.

Two wildcat tests are to be deepened shortly in Little River County. The Herzer & Farr No. 1 Waldrop, SE cor. NW Section 4-13-31, is to be taken to the lime. Its present total depth is 3,446 feet, in the top of the Cotton Valley formation. The Joe G. Strahan and others No. 2 Dierks Lumber Co. is coring at about 3,500 feet at the end of the week, with the lime as the objective.

Kansas Fields

(Continued from Page 75)

21-25-1e, Goodrich pool, Sedgwick County, entered Mississippi lime at 2,987 feet, total depth 2,997 feet, pumped 135 bbls. of oil in eight hours and made potential of 406 bbls.

Rice County

The largest of three producers completed in the Geneseo field, Rice County, was Shell Petroleum Corp. No. 12 Zajic, SE SW NE Section 13-18-8w. Arbuckle lime was topped at 3,210 feet, total depth 3,227 feet, and it pumped 877 bbls. of oil in eight hours, making potential of 2,630 bbls.

Continental Oil Co. No. 4 Williams, SW NE NW section 13-18-8w, had Arbuckle lime at 3,187 feet, total depth 3,228 feet, pumped 829 bbls. of oil in eight hours and made potential of 2,487 bbls.

Phillips Petroleum Co. No. 2 Bolton, NW NW NE Section 31-18-7w, pumped 511 bbls. of oil in eight hours from Arbuckle lime topped at 3,186 feet, and was rated potentially at 1,534 bbls. Total depth was 3,189 feet.

Texon Oil Co. No. 1 Johnson, SW SW SE Section 10-20-9w, Kessling pool, found Arbuckle lime at 3,208 feet, was bottomed at 3,228 feet, pumped 226 bbls. of oil in eight hours and made potential of 678 bbls.

J. H. Tatlock No. 8 Drews, SW NE SW Section 5-20-10w, Silica field, pumped 354 bbls. of oil in eight hours and made potential of 1,063 bbls. Top of Arbuckle lime was 3,324 feet, total depth 3,329 feet.

First reports of Rice County operations: Continental Oil Co. No. 1 Poland, SW SW SE Section 30-18-7w, Geneseo area, building rotary rig; Shell Petroleum Corp. No. 13 Zajic, SE NE NE Section 13-18-8w, building rotary rig; J. H. Tatlock No. 9 Drews, SE NE SW Section 5-20-10w, Silica field, surface casing; same operator's No. 2 Bayer A, SW NW NE Section 7-20-10w, location; same operator's No. 5 Bayer B, SE NE NW Section 7-20-10w, rotary rig.

Butler County

Rex & Morris No. 1-B Brewer, NW NW NE Section 23-28-7, Brandt area, Butler County, was dry and abandoned at 3,123 feet, total depth.

Same operators' No. 2 Johnson, SE cor. Section 20-28-7, Guenther area, was a location. Landon & Allison No. 1 Shriver, NE NW NE Section 28-27-6, Stern area, was rigging up machine.

Greenwood-Woodson Counties

I. Katz No. 3 Life, NE NW NE Section 13-26-9, Greenwood County, was dry and abandoned at 2,146 feet, total depth.

C. C. Whittaker No. 1 Anderson, NW SE SE Section 5-28-11, was abandoned at 550 feet, total depth.

Same operator's No. 1 Pottorff, SW SW NW Section 16-28-11, was reported abandoned after rigging up.

Harper No. 9 Figge, C N half NW SE Section 28-23-14, Woodson County, topped Mississippi lime at 1,653 feet, total depth 1,678 feet, and pumped 50 bbls. of oil in 24 hours.

Cowley-Sumner Counties

Phelps & Spencer No. 1-A Asmusson, SE SE NW Section 29-30-5, Cowley County, had a slight showing of oil at 2,230 feet, but was dry and abandoned at 2,290 feet, total depth.

Leo Wentworth No. 2 Latta, SE SE NE Section 8-30-2w, Latta pool, Sumner County, found Kansas City lime at 3,045 feet, total depth 3,092 feet, and made potential of 83 bbls. of oil.

Same operator's No. 3 Latta, NE NE NE Section 8-30-2w, was a location.

Hartman & Blair No. 1-A Waite, SE NE SW Section 21-31-4, Hittle pool, Cowley County, was a rotary rig.

Ellis County Test

Cities Service Oil Co. was rigging up rotary at No. 6 Rumsey, NW SW SE Section 23-11-17w, new operation in the Bemis field, Ellis County.

Rocky Mountain Area

By
T. R. INGRAM

Winter Weather Slows Down the Northern State Oil Fields

DENVER, Colo., Dec. 5.—Drilling operations in the northern Rocky Mountain area are slowing down on account of winter weather and approximately 35 wildcats were idle during the week.

Colorado had one new operation in the old Boulder field. The Kuykendall well of the Mountain Fuel Supply Co. in the Hiawatha gas field averaged around 85 bbls. of oil per day on a 60-day test.

Wyoming had two completions, a dry hole in Valentine M. Kirk's test on the Five Mile structure in Big Horn County, and a failure in the shallow Shawnee district in Converse County. There were three new operations, two of which were in Lance Creek, Texas Co. Frontier Petroleum Co. wildcat in the Dry Piney district is showing signs of cratering from upper gas.

Montana had one completion, a small well in the Kevin-Sunburst field, and one new operation in the same area.

NEW MEXICO

Interest of New Mexico operators continued to center in the Lovington area of Lea County, where several important tests are being drilled, with one near completion as a gas well.

Newest wildcat in the district is Skelly Oil Co. No. 1-N State, C NW NE Section 36-16-36, which was drilling below 1,100 feet in red rock. Location is 2 miles north of Westmount Oil Co. No. 1 Amerada-State, discovery gasser in the area.

Another wildcat, Barnsdall Oil Co. No. 1 Humble-State, C NE SE Section 33-16-36, about 3 miles northwest of the Westmount strike, was drilling below 4,155 feet in anhydrite and lime, with operators endeavoring to complete it as a producer by December 17 to protect lease. It logged a showing of gas at 4,100-4,110 feet. Brown lime was topped at 3,350 feet, datum of plus 572. It checked 78 feet low on Yates sand in comparison with the Westmount well, topping the sand at 3,210 feet.

The Westmount well was bottomed at 3,986 feet in anhydrite, where it blew out with an estimated 7,000,000 to 30,000,000 feet of dry, sweet gas daily. A split 8⅝-inch casing necessitated setting of 5½-inch casing at 3,013 feet to save hole. This well will be completed as a gasser to protect short term leases. Location is 660 feet from north and about 2,280 feet from east line of Section 12-17-36, 6 miles south and 2 miles east of Lovington.

Amerada Petroleum Corp. No. 1-LA State, C SE SW Section 1-17-36, northwest offset to the Westmount well, and Stanolind Oil & Gas Co. No. 1 State, C SW SE Section 1-17-36, north offset to the discovery, were drilling ahead.

Completions of the week in Lea County included four producers in the Vacuum field. They were:

Magnolia Petroleum Co. No. 18 State-Bridges, C SE NW Section 2-22-36, topped pay at 4,570 feet, total depth 4,700 feet, and flowed 373 bbls. of oil naturally in 24 hours.

Standard Oil Co. of Texas No. 2 State, Lease 4, C SW SE Section 27-17-35, was bottomed at 4,585 feet with top of pay at 4,400 feet, and flowed 35 bbls. of oil an hour naturally and through tubing choke on nine-hour test.

Shell Petroleum Corp. No. 1-H State, C NW SW Section 29-17-35, found pay at 4,475 feet, total depth 4,700 feet, was acidized and shot and flowed 133 bbls. of oil in 12 hours through choke on 2-inch tubing set at 4,484 feet.

Texas Co. No. 2-N State, C NW SW Section 30-17-35, flowed 57 bbls. of oil in eight hours through open tubing. Top of pay was 4,450 feet, total depth 4,720 feet.

Completions elsewhere in Lea County included: Continental Oil Co. No. 3 State J-2, C SE NE Section 2-22-36, topped pay at 3,740 feet, total depth 3,826 feet, and flowed 78 bbls. of oil an hour, with 784,000 feet of gas.

Twin Oil Corp. No. 1 Hare, C SE SW Section 33-21-37, Hardy area, flowed 103 bbls. of oil daily from pay topped at 3,655 feet, total depth 3,754 feet.

Skelly Oil Co. No. 2 Baker, C NW NW Section 27-22-37, an old well in the Penrose-Skelly area, was deepened to 3,714 feet and recompleted, flowing 53 bbls. of oil in 15 hours.

Same company's No. 1-B King, C NE SW Section 33-22-37, was completed for 194 bbls. of oil a day. Top of pay was 3,573 feet, total depth 3,710 feet.

Weiner No. 1 Woolworth, SE NE SW Section 33-24-37, Langlie area, topped pay at 3,498 feet, total depth 3,550 feet, and flowed 30 bbls. of oil an hour naturally through 2-inch tubing set at 3,442 feet.

Gulf Oil Corp. No. 1 Holt, C SW SE Section 16-24-37, pumped 11 bbls. of oil daily through 2-inch tubing set at 3,460 feet. It was bottomed at 3,548 feet, with top of pay at 3,425 feet.

Humble Oil & Refining Co. No. 4-H State, C NE NW Section 34-22-37, had pay at 3,460 feet, total depth 3,660 feet, and flowed 183 bbls. of oil daily, accompanied by 414,000 feet of gas.

In the northwest corner of Eddy County, Dominion Oil & Gas Co. No. 2 Johnson, C SE NE Section 35-16-31, found pay at 3,693 feet, was bottomed at 4,033 feet and pumped 30 bbls. of oil in eight hours through 2-inch tubing set at 3,624 feet.

J. & L. Drilling Co. No. 2 Hurd, C SE SW Section 11-11-26, Chaves County, was dry and abandoned at 1,980 feet, total depth, in sand.

Interstate Minerals Co. No. 1 Dunigan, NW cor. Section 15-15-30, Chaves County, was dry and abandoned at 3,982 feet, total depth, in lime.

Lea County

Barnsdall Oil Co. No. 1 Humble-State, C NE SE Sec. 33-16-36. Drlg. 3,704 ft.
Skelly Oil Co. No. 1-N State, C NW NE Sec. 36-16s-36. Rng. csg. 330 ft.
Amerada Pet. Co. No. 1-LA State, C SE SW Sec. 1-17-36. Drlg. 198 ft.
Amerada Pet. Corp. No. 5-VA State, C NW NW Sec. 22-17-35. Drlg. 4,481 ft.
Cities Service No. 1-L State, C SE SW Sec. 15-17-35. Drlg. 4,442 ft.
Continental Oil Co. No. 1 State H-22, C SW SE Sec. 22-17-34. S.D. wtr. 1,482 ft.
Continental Oil Co. No. 3 State H-35, C NW NE Sec. 35-17-34. W.O.C. 4,148 ft.
Continental Oil Co. No. 1 State 1-7, NE NW NE Sec. 7-17-34. T.D. 4,895 ft.; to acdz.
Devonian Oil Co. No. 1 State-Ritts, C NW NW Sec. 21-17-34. T.D. 4,746 ft.; tstg.
Helmerich & Payne and Continental Oil Co. No. 1-G-36 State, C NW SW Sec. 36-17-35. T.D. 4,950 ft.; C.O. to 4,925 ft.; to P.O.P.
Magnolia Pet. Co. No. 2-G State, C SE NE Sec. 24-17-34. Drlg. 3,845 ft.
Magnolia Pet. Co. No. 2-M State, NW NW Sec. 34-17-35. Drlg. 4,315 ft.
Magnolia Pet. Co. No. 19 State-Bridges, C NW NW Sec. 24-17-34. T.D. 4,700 ft.; swbg.
Magnolia Pet. Co. No. 20 State-Bridges, C SW NW Sec. 24-17-34. W.O.C. 832 ft.
Maljamar O. & G. Co. No. 1-B Baish, C NE NW Sec. 22-17-32. Drlg. 3,763 ft.
Maljamar O. & G. Co. No. 6 Mitchell, C SW NE Sec. 20-17-32. Drlg. 3,502 ft.
Maljamar O. & G. Co. No. 1-B State, C SW SE Sec. 16-17-32. T.D. 4,125 ft.; swbg.
Ohio Oil Co. No. 3 State-McCallister, C SW SW Sec. 25-17-34. Drlg. 2,945 ft.
Phillips Pet. Co. No. 2 Hale, C NE SW Sec. 35-17-34. Drlg. 4,225 ft.
Phillips Pet. Co. No. 3 Hale, C SE SE Sec. 35-17-34. Drlg. 3,460 ft.
Phillips Pet. Co. No. 1 Mabel, C SW NW Sec. 35-17-34. T.D. 4,715 ft.; tstg.
Phillips Pet. Co. No. 12 Santa Fe, C NE SW Sec. 28-17-35. Drlg. 3,212 ft.
Phillips Pet. Co. No. 13 Santa Fe, C NW NW Sec. 28-17-35. Drlg. 3,351 ft.
Phillips Pet. Co. No. 14 Santa Fe, C SE SE Sec. 20-17-35. Drlg. 3,891 ft.
Phillips Pet. Co. No. 15 Santa Fe, C NE NE Sec. 28-17-35. Drlg. 4,212 ft.
Phillips Pet. Co. No. 17 Santa Fe, C SE SW Sec. 26-17-35. Drlg. 3,285 ft.
Phillips Pet. Co. No. 19 Santa Fe, C NW NE Sec. 35-17-35. W.O.C. 1,790 ft.
Shell Pet. Corp. No. 2-B State, C NE SE Sec. 30-17-35. W.O.C. 4,300 ft.
Shell Pet. Corp. No. 2-F State, C SE SW Sec. 29-17-35. Drlg. 4,178 ft.
Shell Pet. Corp. No. 1-I State, C SW NW Sec. 29-17-35 T.D. 4,753 ft.; 500 ft. O.I.H.
Shell Pet. Corp. No. 1-N State, C NW NE Sec. 28-17-35. Drlg. 4,234 ft.
Shell Pet. Corp. No. 1-O State, C SE NE Sec. 34-17-34. T.D. 4,785 ft.; waiting C.O. unit.
Shell Pet. Corp. No. 1-S State, C NE SE Sec. 21-17-35. T.D. 4,745 ft.; C.O.
Shell Pet. Corp. No. 1-V State, C NE SE Sec. 21-17-35. Drlg. 4,125 ft.
Standard Oil Co. of Texas No. 1 State Lease 5, C NW NW Sec. 27-17-35. T.D. 4,654 ft.; F. 185 B.O.P.D.; S.I.; storage.
Standard Oil Co. of Texas No. 1 State Lse. 6, C NW SW Sec. 34-17s-35. Loc.
Standard Oil Co. of Texas No. 2 State, Lse. 3, C NW NW Sec. 32-17-35. R.U.R.
Standard Oil Co. of Texas No. 3 State, Lse. 4, C NW SE Sec. 27-17-35. W.O.C. 259 ft.
Standard Oil Co. No. 2 State, Lse. 5, C SE NW Sec. 27-17-35. Drlg. 3,147 ft.
Stanolind O. & G. Co. No. 1 State, C SW SE Sec. 1-17-36. Drlg.
Texas Co. No. 1-T State, C SE NE Sec. 25-17-34. T.D. 4,725 ft.; swbg. to test.
Texas Co. No. 1-V State, C NE NW Sec. 34-17-34. T.D. 4,790 ft.; swb. 4 B.O.P.H.
Texas Co. No. 1-W State, C SW SE Sec. 13-17-34. T.D. 4,680 ft.; tstg.
Twin Oil Corp. No. 1-D State, C SW NE Sec. 30-17-35. Drlg.
Westmount Oil Co. No. 1 Amerada, C NW NE Sec. 12-17-36. T.D. 3,986 ft.; S.D.O.
Westmount Oil Co. No. 1 State, C SE NW Sec. 30-17-35. T.D. 4,728 ft.; S.I.
Phillips Pet. Co. No. 16 Santa Fe, C NW SW Sec. 5-18-35. Drlg. 3,445 ft.
Texas Co. No. 3-R State, C SE NE Sec. 6-18-35. Drlg. 2,570 ft.
Amerada Pet. Co. No. 7 Andrews, C E½ NE NE Sec. 23-20-36. R.U.R.
Continental Oil Co. No. 3 Britt B-15, C W½ NW SW Sec. 15-20-37. T.D. 3,836 ft.; F. 37 B.O. in 12 hrs.; to acdz.
Continental Oil Co. No. 2 Meyer B-31, C NE SW Sec. 31-20-38. Drlg. 3,750 ft.
Continental Oil Co. No. 8 Reed B-23, CEL SW NE Sec. 23-20-36. Drlg. 1,295 ft.
Continental Oil Co. No. 2 State C-16, SW SW NW Sec. 16-20-37. Drlg. 2,985 ft.
Continental Oil Co. No. 2 State A-36, NE SE Sec. 36-20-36. Drlg. 3,699 ft.
J. M. Rush No. 3 State A-20, NW SW SE Sec. 20-20-37. T.D. 138 ft.; W.O.C.
Aloco Oil Co. No. 1 Carson, C SW SE Sec. 28-21-37. Drlg. 2,265 ft.
Continental Oil Co. No. 1 Hawk B-6, NW NW SE Sec. 6-21-37. Drlg. 3,520 ft.
Continental Oil Co. No. 3 Lockhart B-1, C NW SE Sec. 1-22-36. C.&P.
Continental Oil Co. No. 4 Lockhart B-31, S½ SE SE Sec. 31-21-36. Drlg. 3,862 ft.
Continental Oil Co. No. 6 Lockhart A-18, C W½ NW SW Sec. 18-21-36. C.&P.
Gulf Oil Corp. No. 3-D Arnott-Ramsey, C NE NE Sec. 33-21-36. T.D. 3,885 ft.; tstg.
Magnolia Pet. Co. No. 1 Carson, C SE NE Sec. 31-21-37. Drlg. 310 ft.
Magnolia Pet. Co. No. 3 Hardy, C NE NW Sec. 29-21-37. Drlg. 3,747 ft.
J. M. Rush No. 1 Weatherly, C SW NW Sec. 21-21-37. W.O.C. 145 ft.
Stanolind O. & G. Co. No. 4-C Hill, C SE NW Sec. 5-21-37. T.D. 3,780 ft.; C.O.
Twin Oil Co. No. 2 Hare, C NW SW Sec. 33-21-37. T.D. 3,748 ft.; F. 80 B.O. in 24 hrs.
Twin Oil Co. No. 2 State, C SW NW Sec. 32-21-37. Drlg. 1,610 ft.
Francis C. Wilson No. 2 State, C NW NE Sec. 7-21-35. Drlg. 3,838 ft.
J. C. Clower No. 1-B Manda, NE NE NW Sec. 28-22-37. Drlg. 1,610 ft.
Devonian Oil Co. No. 2 Christmas, SE SW SE Sec. 28-22-37. Loc.
Gulf Oil Corp. No. 1-F Mattern, C NW NE Sec. 1-22-36. T.D. 3,795 ft.; cmtg.
Humble O. & R. Co. No. 4 Greenwood, C SE SW Sec. 9-22-37. Drlg. 2,784 ft.
Ohio Oil Co. No. 2 Sanders, NW NW Sec. 1-22-36. Drlg. 3,465 ft.
Olean Pet. Co. No. 1 Brunson, SW SE SE Sec. 4-22-37. T.D. 3,737 ft.; F. 35 B.O. in 12 hrs.
Olean Pet. Co. No. 2 Brunson, SW NE SE Sec. 4-22-37. Drlg. 2,895 ft.
Olean Pet. Co. No. 2 Farrell, SW SE SE Sec. 22-22-37. R.U. mch.
Lem Peters No. 2 T. O. May, NW NE NE Sec. 34-22-37. T.D. 3,692 ft.; shot 2,540-3,682 ft.
Lem Peters No. 3 L. J. May, C NE SE Sec. 27-22-37. Straightened hole and drlg. 2,765 ft.
Shell Pet. Corp. No. 4 Grizzell, C SW SE Sec. 8-22-37. Drlg. 2,870 ft.
Skelly Oil Co. No. 1 Baker, C SW SW Sec. 10-22-37. T.D. 3,752 ft.; C.O. 3,740 ft. and F. 75 B.O.P.D.
Walter Donnelly No. 1 Davis, C SE NW Sec. 33-23-37. T.D. 3,600 ft.; S.D. repairs.
Great Western Prod. No. 2-B Leonard, C NW NW Sec. 32-23-37. Loc.
Gulf Oil Corp. No. 1 Alley, C NE SE Sec. 10-23-37. T.D. 3,715 ft.; P.B. 3,686 ft.; C.O. to 3,655 ft.
J. M. Murray, Tr., No. 1 Fanning, SE SW NW Sec. 33-23-37. T.D. 3,434 ft.; gauged 58,000,000 ft. gas.

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Skelly Oil Co. No. 4 Simms, C NW NW Sec. 3-23-37. W.O.C. 3,470 ft.
Texas Pacific Coal & Oil Co. No. 7-A State, NW NW NW Sec. 32-23-36. Drlg. 3,660 ft.
Parker Drlg. Co. No. 3 Erwin, C W½ NE SW Sec. 35-24-37. Drlg. 1,985 ft.
Repollo Oil Co. No. 1 State, 157-C, SW SW SE Sec. 32-24-37. Loc.
Schermerhorn Oil Co. No. 3 Woolworth, NW NW SE Sec. 28-24-37. Rng. csg. 3,240 ft.
Shasta Oil Co. No. 3 Woolworth, NE SE NW Sec. 28-24-37. T.D. 3,585 ft.; F. 49 B.O.P.H.
Texas Co. No. 4 Black, C SE NW Sec. 21-24-37. Drlg. 3,265 ft.
Weier Drlg. Co. No. 2 Woolworth, NE SE SW Sec. 28-24-37. Drlg. 3,066 ft.
Sam Weiner No. 2 Woolworth, SW NW SW Sec. 33-24-37. C.&P.
Anderson & Prichard No. 4 Carlson-Harrison, NE SE NE Sec. 27-25-37. T.D. 3,349 ft.; to shoot.
Anderson & Prichard No. 4 Wells, C NW NW Sec. 5-25-37. T.D. 3,550 ft.; to shoot.
Geo. F. Getty No. 1-G State, NW NW NW Sec. 2-25-37. W.O.C. 116 ft.
Gulf Oil Corp. No. 5 Stuart, C NE NE Sec. 10-25-37. Drk.
Italo Pet. Corp. No. 1 Carlson A-23, NW NW SW Sec. 23-25-37. Drk.
Italo Pet. Corp. No. 1 Carlson B-27, NE NW NE Sec. 27-25-37. Drlg. 3,331 ft.
Italo Pet. Corp. No. 2 Carlson B-27, NE NE SE Sec. 27-25-37. Drlg. 3,102 ft.
Italo Pet. Corp. No. 1 Indiana Pet. Corp., NE NE NE Sec. 6-25-37. Drk.
Richmond Drlg. Co. No. 1-A State, C NW SW Sec. 2-25-37. Drlg. 1,895 ft.
Sam Weiner No. 3 Smith, C N½ NE SE Sec. 4-25-37. T.D. 2,890 ft.; fsg. tools.

Eddy County

Carper Drlg. Co. No. 3 Robinson, SW SW SE Sec. 25-16-31. Drlg. 3,684 ft.
Dominion O. & G. Co. No. 3 Johnson, C NE SW Sec. 35-16-31. T.D. 3,950 ft.; swedging at 2,520 ft.
Fullerton Oil Co. No. 3-A Johnson, C NW SW Sec. 35-16-31. Drlg. 4,126 ft.; S.O.
Danciger O. & R. Co. No. 1-B Turner, CEL NE SE Sec. 17-17-31. Drlg. 3,523 ft.; F. 25 B.O.P.D. (last report).
J. O. & J. H. Hammond No. 1 Paris, NE NW NW Sec. 5-17-29. Loc.
English & Harmon No. 1 Stogner, C NW SE Sec. 31-17-31. W.O.C. 670 ft.
J. E. Hughes No. 1 Brooks, C NE NE Sec. 19-17-28. Drlg. 445 ft.
Etz Bros. No. 5 State, SE NE SE Sec. 16-17-30. T.D. 2,530 ft.; rng. csg.
Flint Prod. Co. No. 1-L Dexter, SE NW SE Sec. 15-17-30. W.O.C. 550 ft.
Franklin Pet. Corp. No. 1 McIntyre, NW NE SE Sec. 20-17-38. T.D. 3,348 ft.; F. 40 B.O.P.D.; still tstg.
F. G. Keyes No. 3 Red Gulch, NW NW NE Sec. 16-17-28. R.U. mch.
Red Lake Oil Co. No. 1 Vandagriff, SE SE NE Sec. 20-17-38. T.D. 1,964 ft.; S.I. storage.
C. S. Powell No. 1 Smith, NW NW NE Sec. 6-17-29. Loc.
Premier Pet. Co. No. 1 Maddren-Beeson, NE SW SE Sec. 28-17-30. T.D. 3,418 ft.; F. 8 B.O.P.D.
Premier Pet. Corp. No. 2-B Beeson, SW NW SW Sec. 27-17-30. Drlg. 3,232 ft.
Adkinson Oil Co. No. 1 Brainard, SE SW SE Sec. 5-18-27. S.D.O. 979 ft.
B. Cockburn No. 1 State, C SW NE Sec. 16-18-31. T.D. 3,303 ft.; pmp. 15 B.O.P.D.
Farmer & Tallmadge No. 1 Hubell, NE SW Sec. 4-18-25. Drlg. by tools at 360 ft.
Paton Bros. No. 1 Erwin, C SE SE Sec. 5-18-31. W.O.C. 750 ft.
Rhodes Drlg. Co. No. 1 Swearingan, NE SE NW Sec. 14-18-31. Drlg. 950 ft.
Worth Drlg. Co. No. 1 Taylor, C SW SW Sec. 12-18-31. T.D. 3,546 ft., sd.
Yates et al No. 1 Yates, C NW SW Sec. 6-18-30. Drlg. 2,380 ft.
Carper Drlg. Co. No. 1 Day, NE NE NE Sec. 3-19-21. T.D. 2,748 ft.; P.B. 2,695 ft.; est. 50-75 B.O.P.D.
George E. Robb No. 1 Cannon, NE SW SE Sec. 4-19-30. S.D.O. 200 ft.
George E. Robb No. 1 Vandagriff, SW NE Sec. 6-19-31. S.D.O. 200 ft.
Martin Yates, Jr., No. 1 Bowers, SW SE SE Sec. 31-19-27. T.D. 1,180 ft.; W.O.C.
Tojan Oil Co. No. 1 Grant, SW SW NE Section 33-20s-25e. R.U. mch.
C. F. Ingram No. 1 Page, NE NE SW Sec. 15-21-28. T.D. 2,855 ft., sd.; S.D.O.
Neil Wills No. 1 Vyall, NE SE NW Sec. 13-21s-28e. Drlg. 130 ft.
F. E. Baker No. 1 Eddy, NE Sec. 12-22-27. T.D. 2,818 ft.; S.D.O.

Chaves County

Nay Hightower No. 1 Billingslea, C SW NE Sec. 28-11-30. T.D. 770 ft.; S.D. for csg.
E. J. Fisher No. 1 Foster, C NW NW Sec. 7-15-26. T.D. 1,281 ft.; S.D.O.

De Baca County

N. F. Woods No. 1 Jones, C NE SW Sec. 17-4n-20. T.D. 190 ft.; S.D.O.
James D. Ward No. 1 Summers, SE NE SW Sec. 15-4n-24e. T.D. 680 ft.; S.D.O.

Roosevelt County

Shell Pet. Corp. No. 1 Harwood, C S½ SE SE Sec. 27-7s-35e. T.D. 4,641 ft.; reaming at 4,495 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 Pajarito, Sec. 22-9n-1e. Drlg. below 700 ft.
Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW Sec. 10-11n-4e. Drlg. 4,400 ft.

McKinley County

Pet. Products Corp. No. 5 Santa Fe, SW NE NW Sec. 1-17-9w. Cmtd. 6⅝-in. 1,604 ft.; W.O.C.
S. Dysart No. 3-A Govt., NE NW NE Sec. 14-14n-10w. Landed 12¼-in. at 1,320 ft.; will cmt.
Pet. Products Co. No. 3 Santa Fe, NE NW Sec. 1-17n-9w. R.U.; (first report).

Rio Arriba County

Oil City Pet. Co. No. 2 Wirt-Sanchez, C Sec. 12-31n-2e. M.I.

San Juan County

The Continental Oil Co. No. 84 Rattlesnake, NW NW SW Sec. 1-29n-19w, was completed in the Dakota at 838 feet, total depth, for 117 bbls. the first 24 hours on the pump.

Goodrun & Vincent No. 3 Hare, SW NE Sec. 23-29n-11w. Drlg. 110 ft.; (first report).
San Juan O. & G. Co. No. 2 Cassidy, NW NW SW Sec. 18-29n-11w. Drlg. 265 ft.; (first report).
Kutz Deep Test, Inc., No. 1 Govt., C NW NW Sec. 28-28n-10w. R.U. and rdy. to spd.
Jack Amenda No. 1, NE NE Sec. 14-29n-13w. Drlg. 625 ft.
Al Greer No. 2 fee, SW SE SW Sec. 10-30-11w. Drlg. bl. sh. 830 ft.
Anna Oil Corp. No. 6 Govt., SW NE NE Sec. 33-30n-11w. S.D. 1,885 ft.; W.O. csg.; S.O. in Farmington sd. but will D.D. to Picture Cliff.
Goodrun & Vincent No. 2 Hare, SE SE Sec. 23-29n-11w. T.D. 1,690 ft.; S.G. 1,510-40 ft.; coal 1,540-50 ft.; cmtd. 5⅛-in. 1,500 ft.; W.O.C.
Goodrun & Vincent No. 1 Seitzinger, NE NW SE Sec. 23-29n-11w. Drlg. 680 ft.
Ted Whetstine No. 1 McGee, NW NW Sec. 20-30n-11w. S.D. 434 ft. for mat.
Bullock & Noland No. 1 Bunce, SW SE Sec. 24-29n-11w. Drlg. 1,023 ft.
San Juan O. & G. Co. No. 1 Cassidy, C SE SE Sec. 19-29n-11w. Drlg. 828 ft.

San Miguel County

Southwest Drlg., Inc., No. 1 Conchas, NW NE Sec. 34-17n-21e. T.D. 1,450 ft.; prep. run 13⅜-in. for W.S.O.

Socorro County

Central New Mexico Oil Co. No. 1, Belen gr., SE NW Sec. 16-3n-1e. S.D. 2,965 ft. after rng. 12½-in.

Torrance County

Drice Co. No. 1 Garland, NE SE NE Sec. 32-7n-7e. S. D.O.; H.F.W. at 1,405-13 ft.
Estancia Valley Carbon-Dioxide Dev. Co. No. 1 Crawford, SE NE NE Sec. 32-7n-7e. Drlg. 1,080 ft.
Chief O. & G. Co. No. 1 Lee, NW NW SW Sec. 12-6n-7e. T.D. 2,215 ft.; C.O. 300 ft.

Valencia County

Old Spanish Grants, Inc., No. 1 San Clemente, C SE SW Sec. 23-7n-1e. Taken over by C. M. Joiner, will install rot. for 6,000-ft. test.
C. A. Grober et al No. 1 Fuqua, NE NE Sec. 19-5n-3e. T.D. 840 ft. (C.D.); W.O. title adj.

COLORADO

Archuleta County

Boone Dev. Co. No. 1 Newton, SE NW SE Sec. 18-33n-1e. T.D. 303 ft.; prep. to run 10-in.
Pagosa Oil & Dev. Co. No. 1 Macht, C Sec. 32-36-1w. S.D. 1,840 ft.

Adams County

J. B. Furstenberg et al No. 1 Hills, SE SE SE Sec. 27-3s-64w. S.D. 4,370 ft.

Boulder County

A new operation is getting under way in the old Boulder field in Reynolds & Roher No. 1 Thomas. Location is a mile west of No. 1 McKenzie, the discovery well, which came in as a gasser about 35 years ago and continued to produce until a few years ago when it caved in and was ruined. At present the field has only a small number of wells which produce an aggregate of around 30 bbls. per day, being pumped at irregular intervals.

Reynolds & Roher No. 1 Thomas, SW SW Sec. 17-1n-70w. R.U.C.T.; (first report).

Elbert County

Plymouth Oil Co. No. 1 Brosky-Union Pacific, C SW SW Sec. 19-10s-60w. T.D. 7,005 ft. in blk. sh.; burying wtr. line and housing in for winter operations.

Fremont County

Stanley Thomas No. 1 Rickwalt, SE SE Sec. 2-19s-70w. S.D. 2,460 ft.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE Sec. 36-7s-88w. S.D. 2,008 ft. for winter after W.S.O. with 5⅛-in. at 1,757 ft.

La Plata County

N. Spatter No. 1-X Bryce, SE SW SW Sec. 31-33n-9w. Drlg. below 2,250 ft.

Las Animas County

Hulme-Johnston-Allison No. 1 Azar, SE SE NW Sec. 27-34s-58w. Drlg. 800 ft.; delayed by sub-zero weather.

Mesa County

Continental Oil Co. et al No. 1 Miller, SW SW NW Sec. 36-8s-91w. S.D. 9,410 ft. for winter.

Moffat County

The Isenberg-Parker-Myers test on Willow Creek ran the 10-inch cave string to 403 feet and is drilling ahead at 450 feet in red Ankareh shale (red beds). At 100 feet it went into a conglomerate, the equivalent of the Shinarmp, where it had a show of oil. This indicates that the well is running about 100 feet higher than expected.

The Mountain Fuel Supply Co. No. 1 Kuykendall, on the Hiawatha dome, completed its 60-day test of oil on November 29. Official figures are not available, but it is reported to have averaged around 85 bbls. per day, making 80 bbls. per day at the end of the test.

Stanolind O. & G. Co. No. 35-SD Parkinson, SE SE NE Sec. 22-4n-92w. T.D. 3,483 ft.; cmtd. lnr.; perf. at 3,480 ft.; tstg.
Isenberg-Parker-Myers No. 1 Myers-State, NW SE NE Sec. 36-4n-103w. Drlg. 405 ft.; landed 10-in. cave string at 403 ft.
C. R. Privett No. 1 Sutton, NE NE SW Sec. 1-5n-96w. Drlg. and C.O. 825 ft.; 8¼-in. at 816 ft.

MacKinnie Oil & Drlg. Co. No. 1 Coles, SW SW SE Sec. 1-3n-92w. T.D. 3,045 ft.; lowering 6¼-in. to bttm.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NW Sec. 31-36s-17w. Drlg. 4,917 ft.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE Sec. 34-11s-75w. Drlg. gritty sh. 6,530 ft.

Prowers County

Continental Oil Co. No. 1 Ruby, C NE NW Sec. 31-21s-44w. T.D. 5,434 ft.; rdy. to res. with C.T.

Pueblo County

C. E. Puckett No. 1 Barber, NW Sec. 35-21s-66w. Drlg. 810 ft.

Eden O. & G. Co. No. 1 Horse Creek, SW SE Sec. 29-19s-64w. Drlg. 1,880 ft. in wet hole, carrying 6¼-in.; 1,200 ft. W.I.H. from Dakota.

Rio Blanco County

Buford Oil Co. No. 1 Govt., C SW SW Sec. 16-1n-91w. T.D. 3,550 ft.; fsg.

Routt County

L. C. Craig and E. L. Moore No. 1-X Erwin, C SW NE Sec. 33-7n-85w. S.D. 165 ft. for winter.

Mid-Colorado Pet. Co. No. 1 Omholt, NE NE SE Sec. 29-4n-87w. S.D. 2,140 ft. for winter.

WYOMING

Big Horn County

Valentine M. Kirk and others No. 1 Frisby, C SW SE Section 11-49n-94w, a Tertiary test on the Five Mile structure southwest of Basin, had water in the first sand in the Fort Union formation and was plugged and abandoned at 1,285 feet. Nothing of importance was found in the Wasatch beds.

Taylor Oil Co. No. 1 Sheets-Govt., SE NE SE Sec. 9-55n-96w Drlg. 1,080 ft.

Yale Pet. Co. No. 2 Allen, Lot 52 (approx. SW NW SW Sec. 34-56n-97w), Drlg. 2,700 ft.

A. L. Rankin No. 1 Karjajla-Rankin, C SW NW Sec. 10-54n-94w. T.D. 590 ft.; P.B. to Embar sd. 555-75 ft. and acd. 500 gal. without results; S.D.O.

Prescott & Mileski No. 1 Govt., NE NW SW Sec. 15-1n-93w. Cmtd. 8¼-in. at 1,027 ft.; W.O.C.

Clifford S. Johnson No. 1 Johnson, CEL NW NW Sec. 24-51n-93w. Rig; W.O. engine.

Joan Oil Co. No. 1 Howell, NE NW NE Sec. 32-55n-97w. T.D. 2,718 ft.; sulfur wtr. in Morrison at 2,695-2,710 ft.; will U.R. 10-in. from 2,555 ft.

John H. Thomas No. 1 Govt., SW SW SE Sec. 3-54n-94w. Drlg. 920 ft.

Campbell County

Fyre & Kreiner No. 2, CSL NW NW Sec. 6-50n-72w. Landed 5⅛-in. on bttm. at 723 ft. and S.D.

Carbon County

Ohio Oil Co.-California Co. No. 7 Union Pacific-Johnson, CEL NE SW Sec. 23-21n-79w. B.R.

Sinclair-Wyo. Oil Co. No. 4 Mahoney, CNL NE SW Sec. 34-28n-88w. Drlg. r.b. 3,512 ft.

Ohio Oil Co. No. 3-A Baker, SW NW SW Sec. 3-23n-79w. T.D. 2,221 ft. in Sundance; top 2,192 ft.; rng. csg. to top of sd.

Ohio Oil Co.-California Co. No. 5-A Kyle, C NW NE Sec. 26-21n-79w. T.D. 5,661 ft.; 7-in. 5,627 ft.; shot open part of sd. and perf. csg. at bttm.; rng. tbg. to test.

Producers Oil Co. No. 1 Lake Valley, 200 ft. CNL Sec. 14-20n-88w. T.D. 1,916 ft.; prep. to run 10-in.

Converse County

Wyoming Southern Oil Co. No. 1 Winda, SW NE NW Section 6-31n-69w, in the southwestern part of the Shawnee activity, was plugged and abandoned at 289 feet. It had a show of oil at 283-86 feet followed by water. It is to the east of the New Era Fuel Co. No. 2 Boot, the most southwesterly gas well.

Wyore Oil Co., headed by Lee Daniels, of Portland, Ore., is drilling a new operation, a diagonal offset on the southwest to the New Era Fuel Co. No. 2 Boot, which was completed last June at 248 feet for 1,500,000 feet of gas per day.

Wyore Oil Co. No. 1 Daniels-Bollin-Niemann, NE NW NE Sec. 12-31n-70w. Drlg. 200 ft.; (first report).

John Ackard No. 1 Carey, SW NW SW Sec. 19-33n-73w. Drlg. 700 ft.

Chas. Wheeler et al No. 1 Fitzhugh, NW Sec. 19-31n-71w. Drlg. r.b. 200 ft.; 10-in. on bttm.

H. O. Emery et al No. 2 Roberts, C SW SE Sec. 2-31n-70w. Drlg. 254 ft.; S.G.

Jack Decker et al No. 1 Simonson, NW NE SE Sec. 16-32n-68w. S.D. 640 ft. for csg.

Wyshawn Oil Co. No. 2 Lindley, C SW SW Sec. 35-32n-69w. T.D. 2,390 ft.; rmg. 10-in. from 1,760 ft. to bttm.

Fred Bunker No. 1 Pestal, SE NE NE Sec. 32-32n-69w. T.D. 483 ft.; prep. to run csg.

New Era Fuel Co. No. 2 Mary Gasper, CNL NW SW Sec. 25-32n-69w. S.D. 670 ft. without tstg.

Wyshawn Oil Co. No. 1 Lindley, NW SE SE Sec. 34-32n-69w. T.D. 2,525 ft.; U.R. 8¼-in. for W.S.O.

Blue Ridge Oil Co. No. 1, SW NW SE Sec. 29-32n-69w. Cmtd. 12½-in. at 100 ft.; drlg. plug.

Dr. Harvey No. 1 Granville-Tinnin, NE NE SE Sec. 6-31n-69w. Drlg. 270 ft.

Fremont County

Lincoln O. & G. Co. No. 3 Tribal, SW SW SE Sec. 23-1s-1e. Spdg. 35 ft.

Frank Pouppirt No. 1 Fidelity Tr., SW NE SW Sec. 27-3n-1w. Drlg. 1,168 ft.; C.D.

Tropic Oil Co. No. 1 Govt., C SE SW Sec. 34-27n-90w. S.D. 3,430 ft.

Consolidated Oil Properties No. 3 Ewart, C SW SE Sec. 16-1n-1w. S.D. 1,150 ft.

Ben Stewart No. 1 Darnell, NE SE Sec. 26-3n-1w. S.D. 2,245 ft. for 7-in.

C. E. Nelson No. 8 fee, CWL NE SW Sec. 27-3n-1w. S.D. 1,200 ft.; S.O. 1,095 ft.

Hot Springs County

Freudental et al No. 7 Patd., NE Tr. 51-B, Sec. 21-43n-92w. Drlg. 275 ft.; (Kirby Creek district).

Italo Pet. Co. No. 1 Skelton-Govt., SE SW NE Sec. 13-44n-98w. T.D. 1,800 ft.; recmtd. 10-in. 1,750 ft.

Lincoln County

H. C. Harris et al No. 1 Govt., SE NW NW Sec. 23-21n-117w. T.D. 1,090 ft.; U.R. 10-in.

Natrona County

General Pet. Corp. No. 2 State, NW SE NE Sec. 16-35n-77w. Drk. foundations run.

General Pet. Corp. No. 1 State, NW NE SE Sec. 16-35n-77w. Cg. 6,838 ft. for first Wall Creek after cond. hole.

Stanolind O. & G. Co. No. 29 Tensleep, C SW NW Sec. 35-40n-79w. T.D. 3,990 ft.; cmtd. 6⅝-in. lnr. at 3,660-3,984 ft.; perf. and tstg.

Niobrara County

The Lance Creek field has two near completions and two new operations. The Ohio Oil Co. No. 6 Cash, an inside well in the Leo, topped the pay at 5,370 feet and was drilled to 5,421 feet. The 7-inch was cemented at 5,369 feet and it is swabbing and testing. The Continental Oil Co. No. 2-B Dielman, a west offset to the Minnelusa Oil Corp. No. 1 H. & M.-3, is drilling plug after setting the 7-inch on top of the Leo sand. Total depth is 5,490 feet. It is expected to be a good well.

Continental Oil Co. released location for its No. 7-B Schuricht, NE SW SE Section 6-35n-65w, which will go to the Sundance. It is an inside well.

The Ohio Oil Co. released location for its No. 6 Leo O.P.C.-16, one-fourth of a mile east of its No. 5 Leo, which was completed in June, 1937, for 1,827 bbls. from the Leo sand at 5,516-37 feet. This well was the discovery in that horizon and marked an extension of the productive area of the field more than 2 miles to the east. A well drilled half a mile to the east appeared to be close to the edge of the Leo horizon.

Ohio Oil Co. No. 6 Leo O.P.C.-16, NW NE SW Sec. 35-36n-65w. Loc.; (first report).

Continental Oil Co. Acct. Buck Creek Oil Co. No. 7-B Schuricht, NE SW SE Sec. 6-35n-65w. B.R.; (first report).

F. F. Hintze et al No. 1 Wright-Govt., NW NW SE Sec. 30-36n-63w. M.I.M.

Fall River Roy. & Prod. Co. No. 10-B Govt., CNL SE SE Sec. 35-40n-61w. Spdg. 60 ft.

Ohio Oil Co. No. 1 Jones, SE NE SE Sec. 30-35n-62w. Drlg. hd. L. 2,390 ft.

J. E. Manning No. 1 Hewitt-Govt., NW SW SW Sec. 4-35n-65w. Loc.

Cow Gulch Oil Co. No. 1 MaGoon, NE NE Sec. 33-35n-64w. Drlg. 660 ft.; through first bench Sundance; wtr. in top; will run 10-in. for form. S.O.

Ohio Oil Co. No. 6 Cash, O.P.C.-2, NW NW NE Sec. 4-35n-65w. T.D. 5,421 ft.; 7-in. 5,369 ft.; swbg. and tstg.

Fall River Roy. and Prod. Co. No. 1 Govt., CSL SE SE Sec. 35-40n-61w. Drlg. 1,796 ft.

H. D. Moore et al No. 1 Bergrem, NW Sec. 23-35n-63w. T.D. 1,769 ft. in Minnelusa; S.O. rng. pkr. to S.O.W. and test.

Adams O. & G. Co. No. 1 Baker, NW NE SW Sec. 8-35n-65w. Drlg. below 3,612 ft.

Continental Oil Co. No. 2-B Dielman, NE NW NE Sec. 8-35n-65w. T.D. 5,490 ft.; drlg. plug.

Park County

Blue Ridge Oil Co. No. 1 Mau, NE NE SW Sec. 25-58n-98w. Loc.

Stanolind O. & G. Co. No. 18 Elk-5, NW NE NW Sec. 30-58n-99w. Drlg. 1,177 ft.

Resolute Oil Co. No. 2 State, C SW SW Sec. 16-57n-101w. Tstg. at 8,690 ft. after drlg. plug.

Platte County

Bill Griffin et al No. 1, NE SE NE Sec. 18-30n-67w. S.D. 550 ft.

Sublette County

Texas Co.-Frontier Petroleum Co. important test on the Dry Piney structure, which was reported to have had a blowout at 5,900 feet two months ago, has shown signs of cratering down the side of the hill on which the rig is located and cement is being run to plug off the gas leak. When the Texas Co. took over the operation to bring the well under control and complete, investigations showed that the trouble came from shallow gas sands between 400 and 700 feet and the blowout lowered the mud to only 800 to 900 feet and the well was not unloaded down to the deeper sands as reported. No gauge has been taken below the depth to which the mud was lowered. Several gauges above that horizon ran from 4,000,000 to 8,000,000 feet in the shallow sands. A sand, believed to be the first Frontier, was drilled from 5,150 to 6,208 feet, but it was hard and tight and had only a few shows in the core. The big sand is expected at around 6,600 feet, but it may not be drilled until spring as the well is at an altitude above 8,100 feet and freezing weather has prevailed for the past six weeks. It is planned to run the 7-inch to 6,245 feet as soon as hole is in condition and then it probably will be shut down until spring on account of the remoteness of the operation, the difficulty of moving in supplies and the cold weather.

Texas Co.-Frontier Pet. Co. No. 1 Unit, SE SE SW Sec. 1-28n-114w. T.D. 6,247 ft.; trying to kill shallow gas.

Yellowstone Oil Co. No. 1, 200 ft. N of S line of the H. L. Budd ranch, SE SE Sec. 31-13n-112w. S.D. 10 ft.

Progressive Oil Co. No. 1 Haddenham, C NE SE Sec. 21-28n-113w. Drlg. 832 ft.

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Here is a picture of profits for Pomona Pump owners. No other pump has a revolvable rubber bearing like Pomona's. The bearing goes around in the bronze retainer, and the shaft goes around in the bearing. Plainly this means that the relative speed of the shaft is cut in two, reducing friction and power loss.

More than that, the rubber is tougher than steel, but also elastic. When sand gets in a Pomona bearing, the rubber takes the rap until the rising water washes out the sand. This action prevents the sand from wearing the stainless steel sleeve on the shaft. You get the benefits of this Pomona patent in greatly prolonged bearing life.

Other benefits to Pomona Pump users are:

1. **Interchangeable column pipe, standardized.**
2. **Interchangeable drive shaft, standardized.**
3. **Semi-open bronze impellers, free from sand-lock.**
4. **Adjustable impellers, to compensate for wear or change in water table.**
5. **Accessible packing gland, above ground.**
6. **Non-reversing ratchet for safety in case of reversal of rotation.**
7. **Streamlined bowls for straight water flow.**
8. **Many other advantages described in new Bulletin No. 26. Send for it.**

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Sweetwater County

Sinclair-Wyo. Oil Co. No. 81, SW NW NW Sec. 11-26n-90w. Drlg. 139 ft.
Sinclair-Wyo. Oil Co. No. 80, NE NE NE Sec. 11-26n-90w. T.D. 1,995 ft.; installing gas-lift.

Uinta County

Stove Creek Oil Co. No. 3 Govt., CWL SW NW Sec. 26-14n-119w. Drlg. 50 ft.
Stove Creek Oil Co. No. 1 Govt., NE SW NE Sec. 26-14n-119w. Drlg. 1,700 ft.
Stove Creek Oil Co. No. 2 Govt., C SW NW Sec. 26-14n-119w. S.D. 350 ft.

Washakie County

Paul Boether No. 1 Govt., SW NW Sec. 4-47n-90w. T.D. 1,700 ft.; drlg. plug; wtr. in first Frontier 1,205-23 ft.
Frison Oil Co. No. 2 Govt., SE SW NE Sec. 24-47n-90w. S.D. 145 ft.

Weston County

Krokar et al No. 1, SE SE NW Sec. 31-47n-63w. Drlg. 200 ft.
James Farrel No. 1 Govt., NE SE SE Sec. 2-44n-61w. Drlg. 74 ft.
Lem Johnston No. 1, C SE SW Sec. 31-44n-62w. Loc.
Selby & Langford No. 1, CNL NW SE Sec. 6-46n-63w. Drlg. 100 ft.
Whedon et al No. 1, Sec. 21-46n-64w. Drlg. below 300 ft.
F. R. Dilger, Tr., No. 16, SW SW NE Sec. 30-46n-63w. T.D. 1,402 ft.; recmtd. csg.
West Osage Oil Co. No. 3, SW SE NE Sec. 15-46n-64w. Hd. tight sd. 2,140-54 ft.; will shoot.
John Borophy No. 1 George, SW SE NW Sec. 26-48n-64w. Drlg. 2,240 ft.

MONTANA

Big Horn County

Buzetti & Corkins No. 1, NE NW Sec. 23-1s-32e. M.I.M.

Blaine County

G. R. Teeters No. 1 Stam, CSL SW SE Sec. 10-31n-18e. (Formerly R. E. O'Keefe). S.D. 860 ft. for csg.; top Eagle 630 ft.

Carbon County

Valentine M. Kirk et al No. 1 Robinson, SW SW NW Sec. 2-7s-21e. R.U.R.
Alex Beaton No. 1, CSL SE SE Sec. 23-6s-23e. T.D. 1,580 ft.; rng. 6¼-in.; O.W.D.D.; (formerly East Bridger Oil Co.).
Miracle Oil Co. No. 2 Govt., CWL NE SE Sec. 4-6s-23e. T.D. 2,337 ft. (C.D.); C.O. to res.; will U.R. to bttm. and set csg.

Cascade County

E. B. M. Oil Co. No. 1 Betts, CSL NW SE Sec. 34-18n-4e. T.D. 1,250 ft.; prep. to res.

Choteau County

Security Pet. Corp. No. 1 Johnson, C NE Sec. 23-26n-3e. S.D. 1,991 ft.; S.D. for. 6⅝-in.; Sunburst 1,935-53 ft.

Dawson County

Frank C. Hughes No. 1 fee, NW NE SE Sec. 5-14n-55w. Drlg. 1,065 ft.

Daniels County

White Tail O. & G. Co. No. 2 Wiley, NW NW NW Sec. 10-36n-50e. Drlg. 1,928 ft.

Fallon County

Montana-Dakota Utilities Co. No. 45, Unit 7, SE NW SW Sec. 25-6n-60e. Drlg. 320 ft.

Fergus County

Baughman & Singley No. 1 Skaggs, C NW SW Sec. 7-15n-20e. S.D. 1,080 ft. (C.D.); in lower Quadrant.
Emmons et al No. 5 Stocker, SW NW SW Sec. 24-22n-18e. Drlg. 950 ft.

Judith Basin County

Fletcher E. Hunt No. 1 Hoven, SE NE NW Sec. 30-14n-15e. Spdg.

Glacier County

Yukon Oil Co. No. 1 Lungren, SE SE SW Sec. 23-37n-5w. Drlg. 2,160 ft.
Texas Co. No. 3 Curran, NE NE NW Sec. 8-32n-5w. Cmtd. 7-in. 2,959 ft.
Consolidated Gas Co. No. 1 Tribal, NW NE NW Sec. 18-32n-5w. Drlg. 2,625 ft.
Santa Rita O. & G. Co. No. 3 Lander, C S½ SE Sec. 16-35n-6w. Loc.

Park County

Ben Ryan et al No. 1 Burgess, SE SW NW Sec. 28-2s-11e. Drlg. 1,550 ft.

Petroleum County

H. Clark Rowland No. 1 Brundidge-Mink, SE NW Sec. 35-14n-25e. Skdg. rig from No. 1 Kalispel.
Watson Oil Co. No. 1 Austed, SW NW SE Sec. 22-13n-28e. Drlg. 800 ft.
O. B. Canfield No. 2 Govt., SE NE NE Sec. 21-17-24e. Drlg. 779 ft.

Richland County

W. M. Fulton No. 1 Richardson, SW SW SE Sec. 29-26n-52e. Drlg. 540 ft.; small S.W. at 435 ft.

Teton County

Zodiac Oil Co.-Gulf States Oil Co. No. 1 Kellogg, NE NW NE Sec. 33-28n-5w. Depth not reported.
Gulf States Oil-Zodiac Oil Co. No. 1 Coffee-Wallenstein, SW SW SW Sec. 5-27n-5w. T.D. 2,525 ft.; drlg. by bit.

Toole County

Kevin-Sunburst had two completions and one new operation. N. C. Morton No. 8 Morton, C SW NW Section 24-34n-2w, was completed at 1,480 feet for 5 bbls. of oil and 5 bbls. of water per day from the Ellis. Contact was at 1,368 feet. The Colonel Kevin Oil Co. No. 1 Government, SW NE NE Section 27-35n-3w, was plugged and abandoned at 1,695 feet.

Henry Vander Pas No. 2 Thompson, NW cor. Sec. 33-35n-3w. Spdg. 80 ft.; (first report).
Mosby Oil Co. No. 1 Pederson, C NE SW Sec. 7-35n-2w. Loc.
Kluth et al No. 2 Gunderson, SW cor. Sec. 18-35n-2w. S.D. 10 ft.
Platt-Bell No. 1 Govt., SW NW NE Sec. 9-34n-2w. S.D. 455 ft.
C. L. Smith, Agt., No. 1 Govt., SW SE NW Sec. 13-35n-2w. S.D. 840 ft.
Big West Oil Co. No. 4 Engle, SW SW SW Sec. 1-35n-3w. T.D. 1,903 ft.; P.B. to 1,636 ft.; shot 30 qts.; rng. tbg.
Aspen O. & R. Co. No. 1 Govt., C NE SE Sec. 25-36n-3w. S.D. 2,050 ft.
W. M. Cassidy No. 1 Phoenix, CNL NW NW Sec. 28-35n-4w. T.D. 2,285 ft.; set 5½-in.; C.O.
Fulton-Commonwealth No. 2 Thompson, NW NE SW Sec. 28-35n-3w. S.D. 1,630 ft.
Chas. Grant et al No. 1 Anderson, SE NE NE Sec. 26-35n-4w. S.D. 2,109 ft.

Yellowstone County

Signal O. & G. Co. No. 1 Stallinberger, NE NE SW Sec. 18-3n-23e. T.D. 5,129 ft.; prep. to run 6⅝-in. to 4,950 ft. and test.
Riverton Oil Co. No. 1 Fox, CEL NW NE Sec. 14-2n-23e. T.D. 1,990 ft.; rng. 6¼-in.

UTAH

Grand County

Cane Creek Oil Co. No. 1 Govt., NW SW Sec. 31-26n-21e. Drlg. 1,875 ft.; 8¼-in. mudded at 1,835 ft.
Crescent Eagle Oil Co. No. 1 Brendel, SW SE Sec. 4-22s-19e. Drlg. 4,110 ft.

Summit County

Longwell Pet. Co. No. 1, SE SW SE Sec. 35-3n-5e. T.D. 2,876 ft.; sdtrkg.

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West Texas Fields

(Continued from Page 68)

feet, 662 bbls. Herschel M. Jaffe No. 1 V. Meyers, dry and abandoned at 2,538 feet: No. 1-B V. Meyers, abandoned location. Western Well Servicing Co. No. 1-C Johnson, 1,963-2,065 feet, 148 bbls.

Yoakum County

Fred M. Allison No. 2 Bennett, 5,014-5,237 feet, 2,231 bbls. Crump & Black No. 4-B Bennett, 5,040-5,240 feet, 2,239 bbls.

WEST CENTRAL TEXAS COMPLETIONS

(24-hour tests)

Callahan County

Johnson No. 3 Higgins, dry and abandoned at 470 feet. Dr. R. R. Morden No. 3 Isenhower, 258-73 feet, 3 bbls.; No. 4 Isenhower, 251-74 feet, 4 bbls.

Coke County

Star & Cecil No. 1 Mims, dry and abandoned at 1,861 feet.

Eastland County

J. C. Ellis No. 1 Gentry, 3,069-3,117 feet, 25 bbls.

Jones County

Condor Pet. Co. No. 1 Sayles, 1,961-70 feet, 799 bbls. Gwynn & Oberby No. 1 Gillespie, dry and abandoned at 2,500 feet. Ungren & Frazier No. 2 Steffens, 1,894-98 feet, 289 bbls.

Palo Pinto County

Palo Pinto Oil & Gas No. 22 Strawn Coal, dry and abandoned at 3,381 feet.

Runnels County

Cannon and others No. 1 Geiseck, temporarily abandoned.

Shackelford County

Pittman-Munzy-Smart No. 2 Green, dry and abandoned at 630 feet.

PANHANDLE FIELD COMPLETIONS

(24-hour tests)

Carson County

Magnolia Petroleum Co. No. 45-A fee, 2,913-50 feet, 297 bbls. Northern Natural Gas Co. No. 1 Martin, 2,670-2,865 feet, 25,813,000 feet of gas.

Hutchinson County

Midstates Oil Co. No. 22 Whittenburg, 2,795-2,845 feet, 725 bbls. Phillips Petroleum Co. No. 8 Haile, 3,010-80 feet, 306 bbls. Stansylvania Oil & Gas No. 7 Stansbury, 2,910-3,010 feet, 457 bbls. Texas Plains Oil No. 10 Watkins, 2,984-3,041 feet, 365 bbls.

Wheeler County

Texwell Oil Corp. No. 1 Schwarting, 1,992-2,180 feet, 19,024,000 feet of gas.

Hall County

English Production Co. No. 1 Eudy, dry and abandoned at 4,016 feet.

East Texas Fields

(Continued from Page 70)

feet, 78 bbls. Tide Water-Seaboard No. 8 Monnig, 5,250-58 feet, 28 bbls.

Franklin County

Byrd-Frost No. 19 Phillips, 4,192-4,290 feet, 126 bbls. Humble Oil & Refining Co. No. 5 Humble-Penn, 4,239-85 feet, 460 bbls.

Freestone County

J. L. Collins & Co. No. 1-A Harwell, 3,983-4,016 feet, 33 bbls.

Houston County

J. G. Mayo No. 1 Lively, dry and abandoned at 5,910 feet.

Navarro County

Heiner & Garnozik No. 1 Fortson Brothers, dry and abandoned at 3,631 feet.

Van Zandt County

W. S. King No. 1 Watson, dry and abandoned at 2,600 feet.

Eastern Field Report

By STAFF CORRESPONDENT

Deep Gas Tests in Western Penn Area Report Progress

PITTSBURGH, Pa., Dec. 5.—The rotary test of the Peoples Natural Gas Co. on the Piedmont Coal Co. lease on Chestnut Ridge, South Union Township, Fayette County, Pennsylvania, was shut down at 6,708½ feet to test the gas showing in the mud. After the hole unloaded itself and the gas blown for about four hours, there was a gauge of about 5,000,000 feet a day.

The test is 188½ feet in the Onondaga lime, the deepest so far penetrated on Chestnut Ridge where gas was present. It is believed that the Oriskany sand should be reached within few feet and the test was made to determine whether the underlying sand would also be productive or if the chert beds in the Onondaga constitute the only reservoir. After the test, drilling was resumed.

The test of the New Penn Development Co. and William E. Snee and others in the same township, south of the rotary test and on the Indian Creek Coal & Coke Co. lease has reached 6,005 feet and should be within 200 feet of the Tully lime, the first definite marker to the lower Devonian. This test appears running high on structure.

South along the ridge in Springhill Township, Fayette County, the test of the L. J. Houze Convex Glass Co. on the Paul Dunham farm is shut down at 7,610 feet with the tools stuck 30 feet off bottom. An effort is being made to whip the line off and resort to a direct fishing job. No additional gas was noticed in the added foot drilled.

SOUTHEAST OHIO

The best producer for the week in Southeast Ohio was J. F. Gordon and others No. 6 Thomas S. Moran, Section 13, Fallsbury Township, Licking County. It was completed in Clinton sand, total depth 3,093 feet, and produced 90 bbls. the first day without a shot.

In Athens County, Gross & McCune completed a 1-bbl. well, No. 3 Pearl and Nettie Sapp at Pratts Fork in Section 13, Lodi Township, in Mitchell sand at 460 feet. In Section 24, Carthage Township, Ernest Gibson drilled a dry hole on the James L. Williams farm through the second Berea sand to 1,754 feet.

In Guernsey County, George E. Jewell and others test on the Luther F. Baumbaugh farm in Section 14, Washington Township, completed in Berea sand at 1,274 feet, produced 7 bbls. of oil and 100,000 feet of gas the first day after a shot.

In Knox County, Franklin Drilling Co. drilled a dry hole on the C. H. Davidson farm in Section 20, Jackson Township, through the Clinton sand to 3,066 feet.

In Licking County, Hoover Brothers' second test on the Robert Ridenour farm in Section 7, Mary Ann Township, in the Berea sand at 650 feet, is showing for a 4-bbl. pumper. In Section 15, Perry Township, Rutledge and Mossholder Oil & Gas Co. completed No. 14 William E. Teagarden in Berea sand at 666 feet and it will make a 1-bbl. pumper.

SOUTHWEST PENNSYLVANIA

In Washington County, Pennsylvania, R. M. Duden and others have a location on the Roy Scarem farm in Hanover Township near Florence which may be drilled to the Bradford sand. A heavy rig is on location.

In Morris Township, Greene County, C. H. McVay and others made a location on the Elmas Laughman farm in the old Dunn Station field. In this township, R. E. Hoskinson is shut down at 2,620 feet in the test on the H. W. Ealy-C. C. Conklin farm.

In Washington Township, Greene County, Equitable Gas Co. has reached 1,818 feet in No. 3 T. J. Huffman and 3,000 feet deepening No. 1 T. J. Ross. In Greene Township, Huffman is drilling at 1,485 feet on the George Hixenbaugh farm.

In Center Township, Greene County, the Carnegie Natural Gas Co. is drilling at 1,610 feet in No. 4 J. H. Orndoff.

In Monongahela Township, Greene County, O. I. Dille and others are drilling at 1,824 feet on the Elmer D. Beckham farm; Brummage & Brummage are rigged up on the S. G. Durr farm. In Aleppo Township, Manufacturers Light & Heat Co. is drilling at 3,000 feet, deepening No. 1 C. J. Behm.

In Washington County, Keystone Drilling Co. had reached 851 feet on the Frank Grego farm in North Strabane Township. In Amwell Township, the Equitable Gas Co. started drilling on the Porter E. Herrod farm.

In Hopewell Township, Washington County, McFadden and others rigged up on the J. W. Reed farm. In Chartiers Township, Cannonsburg Iron & Steel Co. is drilling at 1,435 feet in the second test on its own property.

Deep Tests

In Mercer County, Carnegie Natural Gas Co. cased off the water in the Oriskany sand at 3,801 feet, and resumed drilling. The present depth is 3,845 feet and the formation hard black lime.

In Beaver County, Hanley & Bird have run casing on the S. Calvin farm in South Beaver Township and resumed drilling. This is an Oriskany test a half mile south of the nearest producer.

In Fayette County, Wasson & Co. are shut down at 6,700 feet on the J. H. Sorg farm on Chestnut Ridge in North Union Township and are waiting for a new wire line.

WEST VIRGINIA

Three small oil wells were completed in West Virginia. In Hancock County, James Crago completed No. 11 George R., Charles and James Crago in Clay Township in Berea sand at a depth of 1,250 feet. It is good for 3 bbls. a day.

In Pleasants County, Buffalo Oil Co. completed a test on the A. E. Wilson farm in McKim district in the Injun sand at a depth of 1,725 feet and it is showing for 1 bbl. a day.

In Wirt County, Septer W. Douglass completed No. 3 Anna C. Tucker, in Spring Creek district, in Salt sand at 1,258 feet. It is rated at 6 bbls. a day. In Burning Springs district, Godfrey L. Cabot, Inc., drilled a test on his own fee to 3,002 feet, below the Injun sand, and it is a gas well gauging 47,000 feet a day.

Gas Wells

In Boone County, the Hope Natural Gas Co. completed a test on the H. Nunnencamp farm on Spruce River near the town of Jeffreys in Washington district in Berea sand at 2,428 feet. It is a gas well gauging 3,000,000 feet of gas and 40 bbls. of oil per day. It was shut in to install a separator.

In Cabell County, Thremal Gas Co. completed a second well on the C. E. Perry farm in Grant district at 2,033 feet. Berea was found at 1,995-2,017 feet with 125,700 feet of gas from that formation.

In McComas district, Cabell County, DeJarnette Gas Co. deepened No. 3 J. H. DeJarnette, beginning at 1,522 feet, with Berea at 2,058-77 feet, Brown shale 2,998-3,590 feet, and Corniferous lime 3,590-3,665 feet. Gas gauging 164,000 feet a day is coming from the Berea and Brown shale. Arnold Gas Co. completed a gasser on the Henry Childers farm at 3,532 feet. Big Berea lay at 2,042-78 feet and Brown shale at 2,857-3,532 feet. It gauges 212,000 feet a day.

In Calhoun County, Hope Natural Gas Co. No. 7818 on the G. L. Cabot lease in Washington district was dry and abandoned at 2,088 feet.

In Gilmer County, McCall Drilling Co. completed the second test on the L. E. Ellyson farm in DeKalb district at 1,966 feet as a gas well. The Big lime was at 1,789-1,850 feet, Big Injun 1,850-1,942 feet and the volume 180,000 feet a day. In Troy district, the Decker Drilling Co. drilled a dry hole on the Holmes Harvey farm through the Gantz sand to 1,950 feet.

In Kanawha County, Pure Oil Co. completed No. 292 Williams Coal Co. lease in Cabin Creek district in the Berea sand at 3,005 feet and it is a gas well gauging 497,000 feet a day. In Elk district, Valley Gas Co. is testing a fair gas volume at 2,035 feet in the No. 5 G. W. Harless.

In Wetzel County, Hope Natural Gas Co. completed No. 7821 on the Estel Miller farm in Center district at 2,420 feet. Gas was struck at 2,397 feet and after a 30-quart shot, there was a volume of 115,000 feet a day which may improve after it is cleaned out.

Oriskany Gas Field

No wells were completed during the week, although several have reached the sand, in the Oriskany gas field in Kanawha County. In Poca district, the United Fuel Gas Co. made two locations, No. 4814 and No. 4815, both on the W. F. Beane farm.

In Poca district, this company topped the Oriskany at 4,960 feet in No. 4808 on the J. H. Bumgardner farm and the Corniferous lime at 4,897 feet in No. 4811 on the S. E. Gibson farm.

Deep Tests

In Jackson County, Godfrey L. Cabot, Inc., is shut down with a fishing job at 1,571 feet on the Walker & Jones lease in Washington district.

In Pleasants County, Columbian Carbon Co. had reached 4,587 feet on the Giles Hammat farm in Grant district. Work is progressing slowly due to the oil from the shales.

In Wood County, Potter Development Co. (New Penn Development Co.) is deepening the Oriskany test on the W. H. Orem farm in Harris district and it had reached 5,435 feet and it will be drilled to the Clinton sand. Here, the Corniferous lime was at 4,218 feet; Oriskany 4,326 feet with about 17 to 20 feet of good sand but void of any showing.

New Work

In Brooke County, the Wheeling Steel Corp. made a location for No. 37 fee (Cyrus Ferguson farm, in Cross Creek district).

In Cabell County, the Mountaineer Gas Co. made a location on the Burrill Belson farm in McComas district, elevation 1,025 feet. In Guyandotte district, C. V. Meabon is rigging up on the C. and H. Edgar farm.

In Gilmer County, McCall Drilling Co. has a location on the J. H. Houghton farm on Jones Cabin Run in DeKalb district, elevation 878 feet. Paul K. Weekley will drill on the John F. Gainer farm in this district, elevation 1,120 feet.

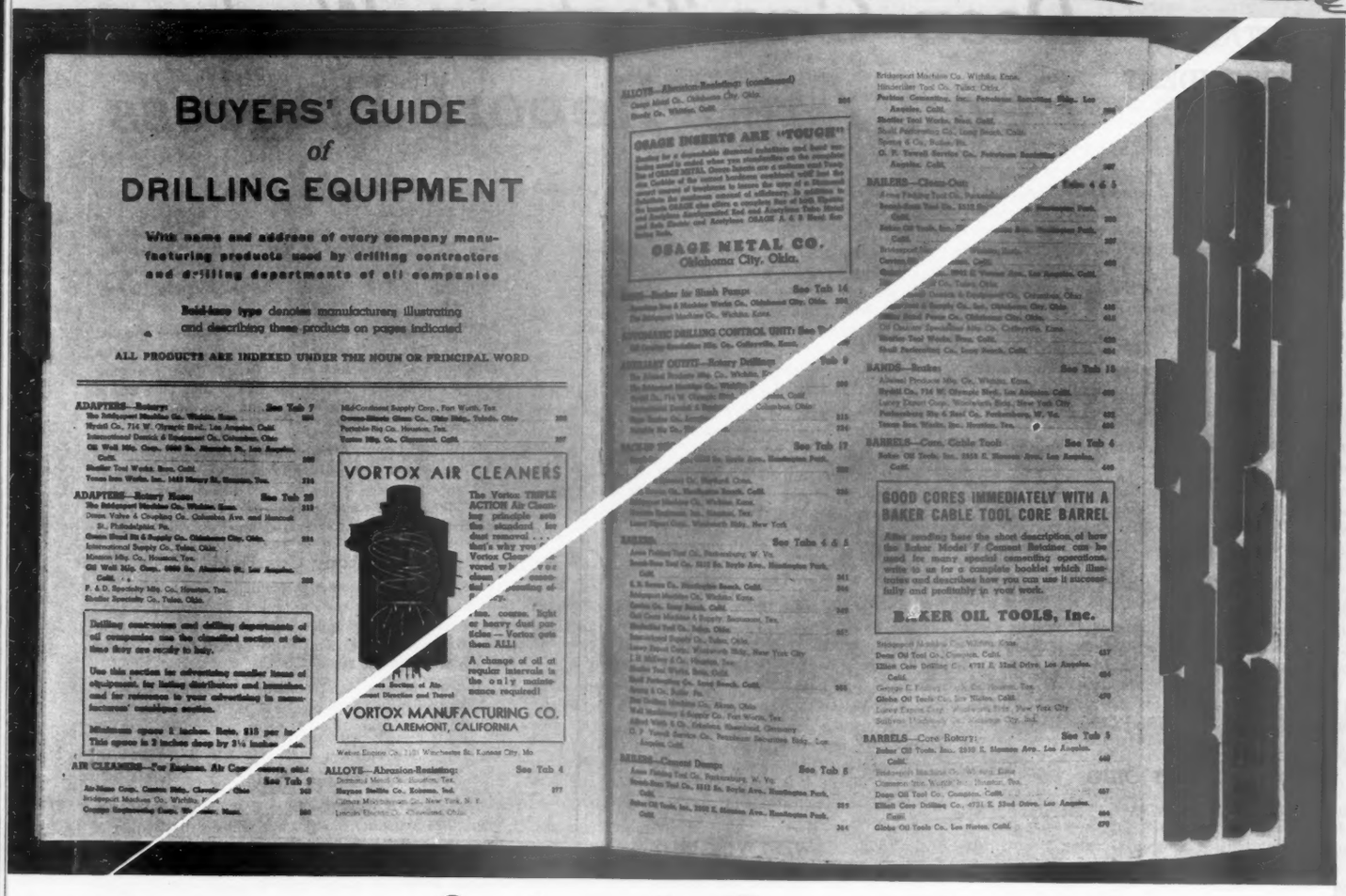
In Roane County, Guy Boggess has started drilling on the William Boggess farm in Reedy district.

In Hancock County, the R. J. Braden Co. is drilling No. 53 C. E. Brenneman in Grant district. In Nicholas County, the Hope Natural Gas Co. is drilling at 385 feet No. 7822 C. & H. Corp. in Jefferson district.

In Wayne County, United Fuel Gas Co. made a location on the A. J. Fry farm in Union district. Kentucky-West Virginia Gas Co. is drilling at 730 feet in No. W-53 W. B. Ferguson in Lincoln district.

In Wetzel County, J. H. Ferrell has a location on the Clarence Blatt farm in Proctor district, elevation 1,265 feet, and will drill a test on the Cely Montgomery farm, elevation 1,198 feet.

PROBLEM: *Who makes it?*



BUYERS' GUIDE
of
DRILLING EQUIPMENT

With name and address of every company manufacturing products used by drilling contractors and drilling departments of oil companies

Bold-face type denotes manufacturers illustrating and describing these products on pages indicated

ALL PRODUCTS ARE INDEXED UNDER THE NOUN OR PRINCIPAL WORD

ADAPTERS—Rotary: See Tab 7

The Bridgeport Machine Co., Wichita, Kans. 326
Wyatt Co., 714 W. Olympic Blvd., Los Angeles, Calif.
International Derrick & Equipment Co., Columbus, Ohio
Oil Well Mfg. Corp., 6000 So. Alameda St., Los Angeles, Calif. 328
Shaffer Tool Works, Bren, Calif.
Texas Iron Works, Inc., 1445 Henry St., Houston, Tex. 324

ADAPTERS—Rotary Hose: See Tab 20

The Bridgeport Machine Co., Wichita, Kans. 310
Dixon Valve & Coupling Co., Columbian Ave. and Hancock St., Philadelphia, Pa.
Green Head Mfg. & Supply Co., Oklahoma City, Okla. 324
International Supply Co., Tulsa, Okla.
Mission Mfg. Co., Houston, Tex.
Oil Well Mfg. Corp., 6000 So. Alameda St., Los Angeles, Calif. 328
F. & D. Specialty Mfg. Co., Houston, Tex.
Shaffer Specialty Co., Tulsa, Okla.

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AIR CLEANERS—For Engines, Air Compressors, etc.: See Tab 9

Air-Maze Corp., Cuyuna Bldg., Cleveland, Ohio 343
Bridgeport Machine Co., Wichita, Kans.
Cooper Engineering Corp., Springfield, Mass. 330
Mid-Continent Supply Corp., Fort Worth, Tex.
Owens-Illinois Glass Co., Ohio Bldg., Toledo, Ohio 335
Portable Rig Co., Houston, Tex.
Vortox Mfg. Co., Claremont, Calif. 327

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Western Engineer Co., 1120 Winchester St., Kansas City, Mo

ALLOYS—Abrasion-Resisting: See Tab 4

Diamond Metal Co., Houston, Tex.
Haynes Stellite Co., Kokomo, Ind. 377
Gilbreth Manufacturing Co., New York, N. Y.
Lincoln Electric Co., Cleveland, Ohio

ALLOYS—Abrasion-Resisting: (continued)

Owen Metal Co., Oklahoma City, Okla. 326
Brady Co., Whittier, Calif.

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...Rocker for Slush Pumps: See Tab 14

Hamilton Iron & Machine Works Co., Oklahoma City, Okla. 326
The Bridgeport Machine Co., Wichita, Kans.

AUTOMATIC DRILLING CONTROL UNIT: See Tab

Gulf Coast Automation Mfg. Co., Coffeyville, Kans.

AUXILIARY OUTFIT—Rotary Drilling: See Tab 9

The Bridgeport Machine Co., Wichita, Kans. 326
The Reliance Machine Co., Wichita, Kans.
Wyatt Co., 714 W. Olympic Blvd., Los Angeles, Calif.
Ingersoll-Rand Co., 11 Broadway, New York City
Oil Well Supply Co., Pittsburgh, Pa.
Shaffer Tool Works, Bren, Calif.
Texas Iron Works, Inc., Houston, Tex.

BACKUP TONGS: See Tab 17

Byron Jackson Co., Hartford, Conn.
Hamilton Iron & Machine Works Co., Oklahoma City, Okla. 326
Reed Roller Bit Co., Houston, Tex.
Shaffer Tool Works, Bren, Calif.
Texas Iron Works, Inc., Houston, Tex.
Lone Star Steel Corp., Wentworth Bldg., New York City

BAILERS: See Tabs 4 & 5

Acme Fishing Tool Co., Bakersfield, W. Va.
Beach-Russ Tool Co., 5312 So. Boyle Ave., Huntington Park, Calif. 341
E. N. Brown Co., Huntington Beach, Calif. 346
Bridgeport Machine Co., Wichita, Kans.
Cortez Oil Tools, Long Beach, Calif. 349
Gulf Coast Machine & Supply Co., Beaumont, Tex.
Hydraulic Tool Co., Tulsa, Okla. 327
International Supply Co., Tulsa, Okla.
Lone Star Steel Corp., Wentworth Bldg., New York City
J. H. McEvoy & Co., Houston, Tex.
Shaffer Tool Works, Bren, Calif.
Southern Pattern Co., Long Beach, Calif. 333
Spang & Co., Butler, Pa.
Star Drilling Machine Co., Akron, Ohio
Wall Industrial Supply Co., Fort Worth, Tex.
Alfred Wirth & Co., Erkelenz, Rheinland, Germany
O. P. Yowell Service Co., Petroleum Securities Bldg., Los Angeles, Calif.

BAILERS—Cement Dump: See Tab 5

Acme Fishing Tool Co., Bakersfield, W. Va.
Beach-Russ Tool Co., 5312 So. Boyle Ave., Huntington Park, Calif. 341
Baker Oil Tools, Inc., 2535 E. Slauson Ave., Huntington Park, Calif. 344
Bridgeport Machine Co., Wichita, Kans.
Hinderliter Tool Co., Tulsa, Okla.
Perkins Cementing, Inc., Petroleum Securities Bldg., Los Angeles, Calif. 328
Shaffer Tool Works, Bren, Calif.
Shell Petroleum Co., Long Beach, Calif.
Spang & Co., Butler, Pa.
O. P. Yowell Service Co., Petroleum Securities Bldg., Los Angeles, Calif. 327

BAKERS—Clean-Out: See Tabs 4 & 5

Acme Fishing Tool Co., Bakersfield, W. Va.
Beach-Russ Tool Co., 5312 So. Boyle Ave., Huntington Park, Calif. 341
Bolon Oil Tools, Long Beach, Calif. 327
Bridgeport Machine Co., Wichita, Kans.
Cortez Oil Tools, Long Beach, Calif. 349
Guiberson Corp., Dallas, Tex.
Gulf Coast Machine & Supply Co., Beaumont, Tex.
Hydraulic Tool Co., Tulsa, Okla. 327
International Supply Co., Tulsa, Okla.
Lone Star Steel Corp., Wentworth Bldg., New York City
Lucey Export Corp., Wentworth Bldg., New York City
Shaffer Tool Works, Bren, Calif.
Shell Petroleum Co., Long Beach, Calif. 333
Spang & Co., Butler, Pa.
Star Drilling Machine Co., Akron, Ohio
Wall Industrial Supply Co., Fort Worth, Tex.
Alfred Wirth & Co., Erkelenz, Rheinland, Germany
O. P. Yowell Service Co., Petroleum Securities Bldg., Los Angeles, Calif.

BANDS—Brake: See Tab 15

Admiral Products Mfg. Co., Wichita, Kans.
Wyatt Co., 714 W. Olympic Blvd., Los Angeles, Calif. 328
Lucey Export Corp., Wentworth Bldg., New York City
Parkersburg Rig & Reel Co., Parkersburg, W. Va. 325
Texas Iron Works, Inc., Houston, Tex. 324

BARRELS—Core, Cable Tools: See Tab 4

Baker Oil Tools, Inc., 2535 E. Slauson Ave., Los Angeles, Calif. 344

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Dean Oil Tool Co., Compton, Calif. 337
Elliott Core Drilling Co., 4731 E. 52nd Drive, Los Angeles, Calif. 334
George E. Failing Supply Co., Enid, Okla.
Globe Oil Tools Co., Los Nietos, Calif. 370
Lucey Export Corp., Wentworth Bldg., New York City
Sullivan Machinery Co., Chicago, Ill.

BARRELS—Core, Rotary: See Tab 3

Baker Oil Tools, Inc., 2535 E. Slauson Ave., Los Angeles, Calif. 344
Bridgeport Machine Co., Wichita, Kans.
Clemco Inc., Wichita Falls, Houston, Tex.
Dean Oil Tool Co., Compton, Calif. 337
Elliott Core Drilling Co., 4731 E. 52nd Drive, Los Angeles, Calif. 334
Globe Oil Tools Co., Los Nietos, Calif. 370

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Michigan Field Report

By
O. C. PRESSPRICH

Van Buren County Supplied 8 of the 17 New Oil Wells

SAGINAW, Mich., Dec. 5.—Six Michigan oil fields shared production developments for the last week, which saw 17 new oil wells added, along with 6 dry holes. Development continued more orderly, and influenced by recent voluntary curbs and market prices.

Sensational wells were lacking, although Van Buren County's Bloomingdale pool—fastest growing in Michigan—continued dominant with eight new wells, representing nearly 50 per cent of the new development. Clare County's Freeman-Redding pool added one acidized producer in Freeman proper, and three favorable wells in Redding, one doubtful and a dry hole which found an apparent dip in formations, although an offset to good producing wells. The dry hole, however, was scheduled for further testing before abandonment.

Allegan County fields, absent from the previous week's production column, returned last week with four oil wells, three of them in Overisel, where the brunt of a declining market forced a recent curtailment of new development. Monterey Township listed one of the Allegan producing wells of the week. Gladwin County's Bentley Township added one new well, below the average in potential output.

Bloomingdale's eight oil wells last week added approximately 3,100 bbls. daily to potentials, while Clare County's three producers, two natural wells in Redding and an acidized well in Freeman, ran an estimated 3,000 bbls. daily. Other producers of the week added in scattered fields increased potentials by about 700 bbls. daily.

Allegan County

Lee Township (1n-15w)—A wildcat test at Virgil R. D. Kirkham No. 1 Marmon, SE NE NW Section 21, failed as a producer, and was abandoned.

Monterey Township (3n-13w)—Muskegon Development Co. No. 3 Conklin, SE NE SE Section 9, acidized a small natural show to 50 bbls. daily, and indicated a western extension of nearly 1 mile for the old producing section of Monterey. The well gave indication of establishing a connecting link with the old Monterey pool and the newer development in Section 6, which is said to be a part of the Overisel production diagonally to the northwest in Section 36, Overisel. One dry hole was completed at Lentz & Miller No. 1 Kerber, SE NW SE Section 24.

Overisel Township (4n-14w)—Three producers in as many sections of Overisel were developed last week, returning Allegan's boom field to new production after a lapse of two weeks. Muskegon Oil Co. and Muskegon Development Co. No. 1 Rigterink, SW SW NW Section 22, led the new Overisel producers with an estimated 250-bbl. daily producer in the natural state. The well was one of the eastern extensions of the "21" pool and indicated favorable development eastward to join the Section 36 discovery development on the north. Muskegon Oil Co. No. 1 Berens, Jr., SE SE NW Section 36, rated a 50-bbl. daily producer after acid and Stewart Oil Co. No. 1 Holwerda, NW NW NW Section 27, also rated 50 bbls. daily after acid. The Stewart producer continued to link Section 21 production on a diagonal southeast line with the discovery area in Section 36.

Wayland Township (3n-11w)—W. C. Sewell Trust No. 1 Arbanas, NW SW SE Section 8, failed to establish productive wildcat territory and faced abandonment.

Arenac County

Lincoln Township (18n-4e)—A wildcat attempt to prove production diagonally southeast of Adams Township failed last week at B. A. Bartlett No. 1 Clement, NE SW NE Section 6. The hole was listed as dry.

Clare County

Freeman Township (18n-6w)—Responding with prolific production after acid, C. W. Teater No. 2 Van Horn, NW SW NE Section 3, flowed natural about 150 bbls., developed into an estimated 1,900-bbl. producer last week. The well flowed 78 bbls. hourly for a few hours before being pinched in. Formation depths were reported about 20 feet lower than surrounding tests, but operators believed this due to a crooked hole rather than a dip in formation, which appeared to be logical after the favorable response to acid treatment.

Redding Township (19n-6w)—Gulf Refining Co. dominated new production in the Redding field this week with three wells marked as completed, two successfully, and one doubtful, filled with water. There was one other well completed, also doubtful, although a producer. Gulf No. 2 Arthur-Hall, NW SE SW Section 34, provided a question mark, and was temporarily listed as dry, although further testing will be done. The well filled with water and apparently struck a dip in formations. Attempts will be made to shutoff the water before abandoning the well. The No. 3 Arthur-Hall, SE SE SW Section 34, rated a 500-bbl. natural flow, and the No. 4 Arthur-Hall, NE SE SW Section 34, gauged 600 bbls. natural. Both were considered highly favorable for the area, which adjoins Section 3 of Freeman on the north. Daily Crude Oil Co. No. 4 Van Horn, NW SW SW Section 34, on the extreme north of the present Redding development, and close to Gulf No. 2 Arthur-Hall (the apparent dry hole) flashed a heavy producer last week in two hours' run, but large quantities of water were cutting into production. The well showed a similarity to the Gulf water hole, and was believed to indicate a dip in formations in that part of the field. Its heavy early production was made less important, due to the water entering oil production. It flashed 200 bbls. an hour for about two hours before water appeared.

Gladwin County

Bentley Township (17n-2e)—Gulf Refining Co. No. 4 State, SE NE NW Section 20, acidized to a 40-bbl. daily production, slightly below the average producers in the area. It was the only addition of the week to new production in Gladwin fields, Buckeye being absent from the list.

Van Buren County

Bloomingdale Township (1s-14w)—Half of the new Michigan production for the last week was brought in in the fast growing Bloomingdale pool, increasing daily potentials by more than 3,000 bbls. There were eight new producers and one dry hole. Wiser Oil Co. No. 1 Boyer, SE NW NE Section 17, topped the list of producers at 900 bbls. daily natural. It was in the midst of proved territory. Clark & Johnson No. 1 Wiggins, SE SW SW Section 9, brought in a 600-bbl. natural producer, and F. J. White No. 1 Corning, NE SE NE Section 17, was rated at 400 bbls. after acid. Other producers in the field included: Voorhees Drilling Co. No. 1 Melvin, SE SE SE Section 8, rated at 250 bbls. natural; O. O. Borden No. 1 County Road, SE SW SW Section 17, 200 bbls. acidized; W. L. Harvey No. 1 Allen, NE SE SE Section 17, 350 bbls. natural; Jacob A. Delm No. 1 Hansen, NE NE SE Section 17, 200 bbls. acidized; J. E. Flanigan No. 1 Mooney, NE NW SE Section 17, 200 bbls. daily acidized. The one dry hole was Great Lakes Crude Oil Co. No. 1 Niles, NE NE SW Section 18, listed for abandonment.

Illinois Fields

(Continued from Page 63)

casing perforated with 160 holes at 1,774-1,823 feet, pumped 74 bbls. Magnolia Petroleum Co. No. 16 J. H. Young, NE SE SW Section 21-2n-2e, Benoist at 1,820-57 feet, total depth, flowed 192 bbls. Magnolia Petroleum Co. No. 1 W. B. Young, SE NE SW Section 21-2n-2e, Benoist at 1,824-68 feet, total depth, flowed 194 bbls. Paul Rossi No. 1 Chitwood, SW cor. NE SE Section 21-2n-2e, Benoist at 1,876-86 feet, total depth, pumped 70 bbls. of oil and 25 bbls. of salt water. Texas Co. No. 6 D. Young, SE SW NW Section 21-2n-2e, Benoist at 1,795-1,835 feet, total depth, flowed 210 bbls. Magnolia Petroleum Co. No. 13 J. H. Young, SE NW NW Section 28-2n-2e, Benoist at 1,775-1,802 feet, total depth, flowed 216 bbls. Magnolia Petroleum Co. No. 11 S. Shanafelt, NW SW SE Section 29-2n-2e. Benoist at 1,702-63 feet, total depth, swabbed 204 bbls. Ohio Oil Co. No. 3 M. J. Young, SE NE NW Section 29-2n-2e, Benoist at 1,755-85 feet, total depth 1,790 feet, flowed 82 bbls. Ohio Oil Co. No. 4 M. J. Young, NE NE NW Section 29-2n-2e, Benoist at 1,757-86 feet, total depth 1,796 feet, flowed 80 bbls. Texas Co. No. 3 A. McCollum, NW SE SE Section 29-2n-2e, Benoist at 1,734-80 feet, total depth, flowed an estimated 480 bbls. Texas Co. No. 1 Wooter, SW cor. NE SW Section 30-2n-2e, Benoist top at 1,848 feet, McClosky pays at 2,023 to 2,040 feet, flowed 135 bbls. through 1-inch choke. Roberts and Murphy No. 2 Dempsey, NE cor. SE SW Section 31-2n-2e, junked and abandoned at 1,730 feet. Texas Co. No. 8 J. P. Corrull, NW cor. SW SE Section 31-2n-2e, Benoist at 1,734-70 feet, McClosky at 1,968-79 feet, total depth 1,984 feet, casing perforated at 1,736-70 feet and flowed an estimated 350 bbls. from the Benoist. No attempt was made to produce from McClosky. Texas Co. No. 5 Ed Tate, NE cor. SE SW Section 31-2n-2e, Benoist at 1,737-75 feet and McClosky at 1,968-85 feet, total depth. Perforated with 97 shots at 1,740-65 feet and flowed 260 bbls. from Benoist, leaving McClosky untested. Texas Co. No. 2 L. Maxwell, NW NE NE Section 32-2n-2e, Benoist at 1,692-1,746 feet, total depth, flowed an estimated 350 bbls. Texas Co. No. 6 B. McCollum, NW NW NE Section 32-2n-2e, Benoist at 1,679-1,709 feet, total depth, flowed an estimated 350 bbls. Texas Co. No. 3 D. Buckley, NE cor. NW SE Section 33-2n-2e, Benoist at 1,866-1,900 feet, total depth 1,914 feet, flowed 250 bbls. Texas Co. No. 2 Parker, SW SE NE Section 33-2n-2e, Benoist at 1,879-1,910 feet, total depth, flowed 146 bbls. through one-half inch choke.

In Fayette County, Putnam and others No. 1 Shultz, SE SW NE Section 35-6n-1w, a wildcat, Benoist sand at 1,413-18 feet, total depth 1,434 feet, dry and abandoned. Zephyr Drilling Co. No. 1 Fanny Stine, SE SE NE Section 2-6n-2e, Benoist at 1,906-20 feet, total depth 1,952 feet, dry and abandoned. Texas Co. No. 3 N. Sworm, NW NE NW Section 30-6n-3e, St. James pool, saturated sand at 1,621-26 feet, total depth 1,628 feet, pumped 125 bbls. Texas Co. No. 2 N. Sworm, SW NE NW Section 30-6n-3e, Benoist sand at 1,546-90 feet, flowed 192 bbls.

In the Louden pool, Fayette County, Magnolia Petroleum Co. No. 10 T. C. Clow, NE NW NE Section 5-7n-3e, Benoist at 1,546-90 feet, total depth, flowed 192 bbls. Magnolia Petroleum Co. No. 11 Clow, NE NE NW Section 5-7n-3e, Benoist at 1,559-91 feet, total depth, flowed 200 bbls. Magnolia No. 12 Clow, NW NW NE Section 5-7n-3e, Benoist at 1,515-81 feet, flowed 108 bbls. Magnolia No. 13 Clow, NE SE NW Section 5-7n-3e, Benoist at 1,504-30 feet, total depth, flowed 174 bbls. Jarvis Brothers No. 4 Yokey, SW NW SE Section 6-7n-3e, Bethel sand at 1,559-94 feet, total depth, plugged back to 1,589 feet and shot with 30 quarts, pumped 180 bbls. Carter Oil Co. No. 2 Oma Ferguson, SW SW SW Section 7-7n-3e, Weller sand at 1,500-44 feet, shot with 40 quarts, swabbed 109 bbls. through casing. Carter Oil Co. No. 1 Harvey

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Durbin, SE SE NE Section 8-7n-3e, Benoist sand at 1,519-30 feet, shot with 20 quarts, pumped 140 bbls. Papoose Oil Co. No. 4 Owens, NW SW NW Section 8-7n-3e, Weiler sand at 1,467-96 feet, shot with 20 quarts, pumped 75 bbls. Carter Oil Co. No. 1 Ola Harper, NW NW SW Section 17-7n-3e, Weiler sand at 1,501-37 feet, stray sand at 1,575-82 feet, total depth, plugged back to 1,540 feet and shot with 20 quarts at 1,524-32 feet, swabbed 217 bbls. Carter No. 3 Harper, NW SW SW Section 17-7n-3e, Weiler sand at 1,487-1,534 feet, total depth 1,538 feet, shot with 20 quarts, pumped 110 bbls. Angle and others No. 4 Ferguson, NW NE NW Section 18-7n-3e, Weiler sand at 1,495-1,527 feet, total depth, pumped 234 bbls.

Carter Oil Co. No. 1 F. Harding, SW NW NW Section 18-7n-3e, Weiler at 1,510-53 feet, total depth, shot with 40 quarts, swabbed 140 bbls. Carter No. 5 Emma McCormick, SE NW SE Section 18-7n-3e, Weiler sand at 1,492-1,550 feet, stray sand at 1,578-83 feet, total depth, ripped casing at 1,495-1,501 feet and 1,533-37 feet, swabbed 195 bbls. Carter No. 1 John Welker, NW NE NW Section 18-7n-3e, Weiler sand at 1,508-50 feet, stray sand at 1,572-83 feet, ripped pipe at 1,507-11 feet, swabbed 104 bbls. through casing. Carter No. 2 Thomas Mills, SW cor. SE NE Section 19-7n-3e, Weiler at 1,485-1,541 feet, shot with 60 quarts at 1,501-32 feet, pumped 168 bbls. Carter No. 3 Mills, Weiler at 1,516-40 feet, shot with 60 quarts, pumped 219 bbls. Carter No. 2 J. R. Morrison, SW NE NE Section 19-7n-3e, Weiler at 1,475-1,534 feet, total depth 1,478 feet, shot with 20 quarts, pumped 168 bbls. Carter No. 2 T. B. Taylor, SW NW SW Section 29-7n-3e, Weiler at 1,550-87 feet, total depth 1,590 feet, 330 bbls. Shell Petroleum Corp. No. 1 C. F. Fulton, NW SW NE Section 29-7n-3e, Weiler at 1,535-75 feet, pumped 151 bbls. Carter Oil Co. No. 1 Phyllis Reece, NW SE SE Section 30-7n-3e, Weiler at 1,552-88 feet, total depth 1,589 feet, shot with 40 quarts, swabbed 384 bbls. Carter No. 2 Reece, NE SE SE Section 30-7n-3e, Weiler at 1,555-93 feet, shot at 1,562-70 feet with 20 quarts, pumped 202 bbls. Mabee Drilling Co. No. 8 Bank, NE NW SE Section 30-7n-3e, Weiler sand at 1,555 feet, total depth 1,610 feet, pumped 146 bbls. Whisenant and others No. 2 Smith, SE SE NE Section 30-7n-3e. Weiler at 1,545-78 feet, shot with 20 quarts, pumped 180 bbls. Whisenant No. 3 Smith, SW SE NE Section 30-7n-3e, Weiler at 1,545-76 feet, total depth 1,579 feet, shot with 20 quarts, pumped an estimated 200 bbls. Jarvis Brothers No. 3 Homans A, SW cor. SE SE NE Section 31-7n-3e, Weiler at 1,533-50 feet, pumped 550 bbls., using 2½-inch tubing.

n the north end of the Louden pool, Carter Oil Co. No. 1 Clinton Miller, NE SE NE Section 16-8n-3e, had Bethel sand at 1,560-91 feet, shot with 60 quarts, flowed 385 bbls. Carter Oil Co. No. 3 Larimore, Bethel sand at 1,524-34 feet, total depth 1,541 feet, shot with 21 quarts, pumped 150 bbls. Carter No. 2 David Doty, NW NE NW Section 14-8n-3e, Weiler at 1,496-1,536 feet, shot with 80 quarts, pumped 175 bbls. Carter No. 1, SW NW NE Section 14-8n-3e, Weiler at 1,489-1,518 feet, total depth 1,524 feet, shot with 50 quarts, flowed 440 bbls. Carter No. 2 A. Watson, SE NE SW Section 33-8n-3e, Weiler at 1,477-1,528 feet, stray sand 1,565-71 feet, Bethel at 1,581-86 feet, total depth. Ripped casing at 1,495-1,524 feet and 1,473-85 feet, pumped 169 bbls. Carter No. 3 Tom Wright, N half SW SE SE Section 20-8n-3e, Bethel sand at 1,556-83 feet, total depth, shot with 40 quarts, pumped 226 bbls. Magnolia Petroleum Co. No. 4 Della Rhodes, SE SE SW Section 27-8n-3e, Bethel sand at 1,583-98 feet, total depth, shot with 20 quarts, pumped 75 bbls. of oil and 15 bbls. of water. Mabee Drilling Co. No. 2 Kiepp, SE SE SW Section 31-8n-3e, shot with 15 quarts at 1,552-66 feet and with 40 quarts at 1,547-52 feet, pumped 50 bbls. Carter No. 1 Fred L. Brown, NW SW NW Section 32-8n-3e, casing perforated at intervals from 1,514 to 1,588 feet, pumped 58 bbls. Magnolia Petroleum Co. No. 4 Sarah Clow, SE SE SW Section 32-8n-3e, Benoist at 1,554-82 feet, flowed 205 bbls. Carter Oil Co. No. 3 Winton Taylor, SE NE SE Section 33-8n-3e, Benoist sand at 1,531-63 feet, total depth 1,580 feet, shot with 40 quarts at 1,556-65 feet, pumped an estimated 200 bbls.

In Shelby County, Ray T. Moore and others No. 1 Yokey, NE NW NW Section 4-9n-4e, Benoist sand at 1,658-69 feet, total depth 1,677 feet, dry and abandoned.

In Clark County, Friman Equipment Co. No. 1 Allen Estate, SE cor. NE SE NE Section 31-12n-14w, of second meridian, dry and abandoned at 498 feet.

In Edgar County, J. M. Huber No. 1 Adams, NE NE NE Section 13-14n-11w of second meridian, dry and abandoned at 2,165 feet. McNamara Construction Co. No. 1 Blair, NW NE NW Section 24-14n-14w of second meridian, dry and abandoned at 544 feet. McClosky lime was found at 232-46 feet.

In Fulton County, Ketcherside and others No. 1 Quigle and Frieburg, SW SW NW Section 11-7n-1e of fourth meridian, Devonian lime at 580 feet, total depth 657 feet, 100 feet of oil in the hole after 48 hours from 600-20 feet, abandoned.

In Clay County, Pure Oil Co. No. 2 C. H. Billington, C W half SW SE Section 27-1n-7e, Cisne pool, pay at 3,108-17 feet, total depth 3,119 feet, perforated with 100 holes at 3,104-17 feet and acidized with 5,000 gallons, flowed 332 bbls. through 15/46-inch choke.

In Marion County, Pruitt Brothers No. 1 Cabola, in Section 16-1n-1e, was abandoned at 769 feet.

In Wayne County, Rockhill Oil Co. No. 3 Twist B, NE NW NE Section 5-3s-7e, North Aden pool, had McClosky pay at 3,344-55 feet, flowed 200 bbls. in 14 hours. Al Stengle and others No. 1 Harris, SE NW NW Section 8-3s-9e, a wildcat, Ste. Genevieve limestone top at 3,300 feet, total depth 3,500 feet, no showings, abandoned. H. H. Weinert No. 2 Morlan C, NW SE SW Section 28-2s-7e, North Aden pool, Fredonia lime pay at 3,322-30 feet, total depth 3,336 feet, flowed 57 bbls. in three hours. Texas Co. No. 3 Cravens, NW SW NW Section 33-2s-7e, Fredonia lime at 3,308 feet, pay at 3,306-14 feet and 3,318-22 feet, total depth 3,336 feet, flowed 500 bbls. through three-quarters inch choke. H. H. Weinert No. 2 Morlan B, NE NE NW Section 33-2s-7e, McClosky pay at 3,304-20 feet, flowed 150 bbls. in six hours through tubing.

In Brown County, Fell Oil Trust No. 1 J. Thomas, S half NW SW NW Section 15-1s-2e of fourth meridian, dry and abandoned at 642 feet.

In the Dix pool, Jefferson County, Carter Oil Co. No. 4 Foster, SW NE NE Section 9-1s-2e, Benoist sand at 1,941-59 feet, total depth, pumped 237 bbls.

In Clinton County, H. H. Weinert No. 2 Buehler. NW SW SW Section 36-2n-1w, Benoist sand at 1,334-71 feet, total depth, pumped 50 bbls. H. H. Weinert No. 4 Buehler (formerly No. 3), NW NW SW Section 36-2n-1w, Benoist at 1,361-73 feet, total depth, shot with 10 quarts, pumped 120 bbls.

In Clay County, Pure Oil Co. No. 2 G. W. Sharp-A, C E half NE NE Section 16-2n-8e, Fredonia lime at 2,985 feet, pay at 2,987-97 feet, showings of oil in streaks from 2,997 to 3,093 feet, total depth 3,114 feet, flowed 735 bbls.

In Lawrence County, Cannon and others No. 1 Gillespie, NW cor. NE SW Section 1-2n-12w of second meridian, stray sand at 300-20 feet, total depth 345 feet, pumped 35 bbls. of oil and 35 bbls. of water.

In Clinton County, White and others No. 1 Wilton, SW SE NW Section 19-3n-2w, salt water in Benoist sand at 1,182-88 feet, total depth, abandoned. Cypress sand at 1,057-1,130 feet also contained water. Sappington and others No. 1 Hilgemann, SE cor. NE NW Section 22-3n-3w, had Benoist at 1,134-50 feet and a hole full of water, abandoned. Cypress at 1,014 feet also contained water.

In Clay County, Pure Oil Co. No. 2 G. L. Travis C, C E half SW SE Section 32-3n-8e, Clay City pool, Fredonia top at 2,957 feet, pays at intervals at 2,975-3,073 feet, total depth 3,100 feet, flowed 211 bbls.

In Marion County, Transwestern Oil Co. No. 1 Land Bank, SE NW SW Section 24-4n-2e, Benoist at 1,982-2,005 feet, total depth, dry and abandoned.

In Richland County, Pure Oil Co. No. 2 Frank L. Wakefield, SE SE SW Section 23-4n-9e, Noble pool. Weiler sand at 2,587-2,613 feet, total depth, pumped 424 bbls. of oil and 275 bbls. of salt water.

In Jefferson County, Magnolia Petroleum Co. No. 1 T. J. Harvey, NW NE SW Section 22-2s-1e, McClosky lime at 2,231-37 feet, total depth 2,261 feet, pumped 217 bbls.

New Wildcat Operations

In Clinton County, Phillips Petroleum Co. No. 1 Ackerman, 330 feet from N and 2,385 feet from E line, NW quarter Section 7-1n-2w, set 10-inch casing at 82 feet.

In Schuyler County, Harry Simcox No. 1 Charles Thompson, 400 feet from S and 200 feet from W lines of Section 25-1n-2w of fourth meridian, drilling at 120 feet.

In Clinton County, Newton and Ward No. 1 Trame, 465 feet from N and 550 feet from W lines of Section 8-1n-3w, a location. Salvage Oil Co. No. 1 Trimbley, near C SW NE NW Section 5-4n-12w of second meridian, location.

In Montgomery County, Soliday & Sams No. 1 Moon, NE cor. SW Section 11-7n-3w (corrected location), fishing at 557 feet.

In Jefferson County, Kingwood Oil Co. No. 1 Wayer, SW SE NW Section 9-2s-2e, location.

In White County, Pyramid Petroleum Co. No. 1

Gilbert Wade, SE SE NE Section 4-7s-8e, rigging up rotary.

In Marion County, Lincoln and others No. 1 Beneveti, NW cor. SW SE SE Section 9-1n-1e, rig up.

In Fulton County, Ketcherside and Fiske No. 1 Kelly Frederick, 175 feet from N and 100 feet from E lines of Section 10-7n-1e of fourth meridian, drilling at 35 feet.

In Shelby County, Joe Aylward No. 1 E. E. Bickford, C NW SW SE Section 7-9n-5e, cellar and pits.

In Knox County, O. H. Hammer No. 1 Harry Bragg, 200 feet from N and 400 feet from E lines of SE SE Section 9-11n-2e of fourth meridian, rig.

Among the Wildcats

In Randolph County, American Drilling Co. No. 1 Nicholson, SW NW NW Section 12-5s-9w, was drilling at 1,625 feet.

In Washington County, L. J. Jordan was drilling below 1,021 feet in No. 1 Reinhardt & Scott, C S half SE SE Section 12-1s-3w.

In Bond County, J. E. Huppard and others No. 1 Dresser, NW cor. SE SW Section 21-6n-4w, pay at 1,810-30 feet, produced 25 bbls. fluid per day. It produces from a pay in Devonian limestone. Thornwell Drilling Co. No. 1 Morris, NW NW NW Section 16-6n-3w, drilling at 310 feet.

In Johnson County, Cato Elzie No. 1 Boner, C SW NE Section 30-11s-3e, was drilling at 500 feet.

In Saline County, Flaherty & Waxenberg No. 1 Choisser, NE NW NW Section 5-8s-7e, shut down at 1,100 feet.

In Gallatin County, Bailey & Lucas No. 1 Logan, SW cor. SE NE NE Section 21-8s-8e, was drilling at 1,575 feet in hole full of water.

In White County, Sun Oil Co. No. 1 Brown, C N half SW NW Section 12-4s-9e, had St. Louis lime top at 3,420 feet and was drilling at 3,482 feet.

In Fayette County, Mylius and others No. 1 Freezel, SE NE SW Section 8-6n-3e, drilling at 1,643 feet.

In Coles County, East Oakland Syndicate No. 1 W. J. Temple, SW cor. SE NE Section 36-14n-10e, drilling at 1,165 feet.

In Jefferson County, Benedum & Trees No. 1 Interstate Coal Co., NE NE SW Section 9-4s-2e, drilling at 2,762 feet.

In Wayne County, Roche & Boyles No. 1 McPherson, C S half SE NE Section 4-2s-7e, set 5½-inch casing at 3,253 feet, total depth 3,269 feet. Saturated McClosky "sand" was at 3,253-65 feet.

In Fayette County, Lindsey and others No. 1 Bowers, SW NE SE Section 36-4n-1w, was drilling at 1,210 feet.

In Cumberland County, National Consumers Oil Co. No. 1 Harrison-Ward, NE SE NE Section 17-9n-9e, was shut down at 2,153 feet. Paul Henshaw and others No. 1 Rea, SE SE SW Section 18-10n-9e, spudded.

In Shelby County, Frank Frederick and others No. 1 Fluge, near C N half NE NW Section 34-10n-5e, drilling at 345 feet. Swords & McDougal No. 1 Darst, NW NW NW Section 17-11s-2e, drilling at 850 feet. Independent Refiners & Producers No. 1 J. Hackenburg, SE SW SW Section 20-12n-2e, drilling at 1,285 feet.

In Jasper County, Borah and others No. 1 Vannetta, SE SE NW Section 30-8n-10e, Ste. Genevieve lime at 2,565 feet, drilling at 2,611 feet.

In Macoupin County, W. G. Dillon and others No. 1 Keele, SE SE NE Section 32-10-9w, drilling at 383 feet.

In Shelby County, Prunty Production Co. No. 1 Hickey, SE SW SW Section 34-12n-4e, small showing of oil at 1,911-16 feet, and at intervals from 1,916 to 1,978 feet, total depth. Will underream 6⅝-inch pipe to 1,905 feet and clean out to swab.

In Sangamon County, Morris and others No. 1 King, NW NE SE Section 24-15n-7w, Trenton lime top at 1,797 feet, showing of gas at 1,817 feet, shut down for orders.

In Coles County, Ed Swearer and Crown Petroleum Co. No. 1 Sanders, SE SE NW Section 27-13n-8e, was drilling at 1,780 feet.

In Washington County, G. H. Blankenship No. 1 Dennis, NE SE NE Section 14-3s-3w, moving in rotary tools.

In Fayette County, R. C. Mayes and others No. 1 Defend, NW NW NW Section 26-4n-1w, moved in materials and shut down.

In Bond County, Lindsay Brothers and British American Oil Co. No. 1 Fruitiger, C SW SW SW Section 33-4n-4w, shut down at 675 feet.

In Montgomery County, R. E. Johnston No. 1 Fuller, SW cor. NW Section 7-7n-2w, shut down at 645 feet.

In Jackson County, W. R. Hays No. 1 Bouchet, NE NE SE Section 11-7s-2w, was drilling at 1,260 feet.

In Edgar County, H. H. Shelton and others No. 1 Sarah Wait, C NE NE Section 16-12n-13w from second principal meridian, spudded and shut down.

In Clinton County, Kesl and others No. 1 Marbaum, NW NE SE Section 12-3n-3w, set 7-inch casing at 1,146 feet.

In Jefferson County, Beaver and others No. 1 Eichman, NE cor. Section 28-2s-1e, drilling at 600 feet.

In Marion County, Richland Corp. No. 1 T. B. Beach, SW NW NW Section 1-2n-1e, drilling at 2,093 feet. Ed L. Hohmans No. 1 Shanafelt school, 941 feet from south line and 115 feet from east line, SE quarter Section 8-2n-2e, drilling at 1,650 feet.

In Montgomery County, Soliday & Sams No. 1 Moon, NE cor. SW Section 11-7n-3e, drilling at 910 feet.

CENTRAL OHIO

Central Ohio operators made 11 completions during the week, seven gas wells, two oil wells, and two dry holes.

In Athens County, Ames Township, D. T. Orndoff No. 2 W. C. Mingus, Fraction 24, made 100,000 feet of gas in the Berea sand at 1,366 feet. In Lodi Township, McBill Oil Co. No. 3 Pearl Sapp, Section 13, is a 1-bbl. settled producer in the first Cow Run sand at 458-63 feet.

In Coshocton County, Perry Township, Bell Brothers No. 1 Howard Wilt, Section 6, found only a small showing of oil in the Clinton sand at 3,085-3,139 feet; abandoned.

In Knox County, Harrison Township, Norris Oil & Gas Co. No. 1 Floyd Norris, Lot 6, is a small gas well in the Berea sand at 538 feet. In Jackson Township, Wheeler Oil Co. No. 1 C. H. Davidson, Section 21, made 5 bbls. of oil after a shot in the Clinton sand at 3,015-65 feet; abandoned after testing. In Jackson Township, Pure Oil Co. No. 1 Margaret McCamment, Section 11, found a good showing of oil in the Clinton sand at 3,160 feet and 400,000 feet of gas at 3,175 feet. The well will be shot later.

In Licking County, Mary Ann Township, Ridgeway Oil Co. No. 2 Charles A. Richards, Lot 13, fourth quarter, is a 10-bbl. producer from the Berea sand at 775-87 feet. In Newark Township, J. C. Bebout & Son No. 1 Otto Steinmeir, NE quarter, had 500,000 ft. of gas in the Clinton sand at 2,514 feet.

In Monroe County, Washington Township, R. W. Early Co. No. 1 W. T. Cline, Section 7, was dry at 1,520 feet.

In Noble County, Jackson Township, Permian Oil & Gas Co. No. 1 J. A. Wagner, Section 14, is a small Berea gas well at 1,742 feet.

In Perry County, Madison Township, Atha Co. No. 1 J. A. Wilkins, Section 17, made over 200,000 cu. ft. of gas from the Clinton sand at 3,016 feet.

In Washington County, Liberty Township, G. W. Cullen No. 1 Michael Cullen, Section 21, made 400,000 feet of gas from the Germantown and Maxon sands; total depth, 1,364 feet.

Lima Field

In Seneca County, Clinton Township, Section 17, the Sun Oil Co. No. 1 Jr.O.U.A.M. found the formations to be running low and the test was abandoned. The top of the Trenton was 1,536 feet, total depth 1,842 feet. The same company in the same township is spudding No. 2 on the Mary Crumb tract in Section 7. In Pleasant Township, Jones & Keener No. 25 S. D. Sours is shut down at 2,060 feet.

In Wood County, Portage Township, Goodwill Oil & Gas Co. No. 1 Lester Shinew, is drilling at 450 feet in the Trenton lime and heading for the Green sand.

EASTERN KENTUCKY

ASHLAND, Ky., Dec. 3.—Due partly to the 7- to 9-inch snowfall in this section on Thanksgiving and the following day, operations in the Eastern Kentucky field hit a new low point. Reports were received from only a few districts with one dry hole and a cleaning-out job after a shot included.

In Floyd County, the Kentucky-West Virginia Gas Co. is down 1,425 feet in No. 578 Sherwood Osborn, on Toms Creek.

In the Hell Creek district of Lee County, the Hall company is down 500 feet in No. 1 Crit Childers, 35-acre tract. Teman and others are rigging up No. 1 W. B. Bush, in the same district.

In Martin County, the Kentucky-West Virginia Gas Co. drilled a dry hole in No. 5191, W. R. Crum land, on Coldwater Fork, at total depth of 2,661 feet, in slate. The same company had reached the 1,490-foot mark, in Big Lime, in No. 574 John and Benjamin Sellards nearby, and were drilling at 400 feet, in sand, in No. 5249, Allie Ward land, in the same vicinity. The company is cleaning out after a shot at a total depth of 1,588 feet, in lime, in No. 5235, C. W. Preece land, on Coldwater Fork.

In Knott County, Inland Gas Corp. was drilling at 1,925 feet in No. 203, Curtis Pigman land, on Right Fork of Troublesome Creek, and is down 739 feet, in sand, in No. 204, Virginia-Kentucky Gas Co. land, nearby. The same firm has reached the 2,152-foot level, in sand, in No. 205, Kentucky-West Virginia Gas Co. land, on Trace Fork of Troublesome Creek.

Southwest Texas Fields

(Continued from Page 76)

& Hope No. 1 Cuellar Brothers, sand 2,798-2,809 feet, 90 bbls., jetting. Rancho Solo field: McCollum and others No. 3 Gruy, perforated casing 1,839½-45 feet, 12 bbls., pumping.

Hidalgo County

Samfordyce field: A. T. Groboski No. 2-C Guerra, perforated casing 2,930-44 feet, dry gas well.

Jim Wells County

South Alice field: W. G. Coates No. 4 Stillwell, perforated casing 5,325-45 feet, 98 bbls., three-sixteenths inch choke.

McMullen County

Ezzell field: E. M. Jones No. 44 Ezzell, perforated casing 1,557-68 feet, 276 bbls., pumping. Munson field: N. V. Duncan No. 10 Nueces Land & Livestock Co., sand 1,206-15 feet, 60 bbls., pumping.

Nueces County

Luby field: Seaboard Oil Co. No. 15 Luby, perforated casing 5,055-58 feet, 110 bbls., eighth-inch choke. Stanolind Oil & Gas Co. No. 17 Spessard, sand 5,063-68 feet, 92 bbls., 5/32-inch choke. Sun Oil Co. No. 4 McCann, perforated casing 5,050-55 feet, 115 bbls., eighth-inch choke. Clara Driscoll field: Heep Oil Corp. and others No. 4 Rogers, perforated casing 5,312-15 feet, 208 bbls., three-sixteenths inch choke. South Clara Driscoll field: Texas Co. No. 3 Flynn, perforated casing 3,455-60 feet, 429,000 feet of gas, eighth-inch choke. Saxet field: C. Andrade No. 10 Frank, perforated casing 6,710-20 feet, 144 bbls., 9/64-inch choke. Barnsdall Oil Co. No. 2-A Frank Bliss, sand 4,728-36 feet, 60 bbls., 7/64-inch choke.

Refugio County

Tomoconnor field: Copan Oil Co. No. 38-B O'Connor, sand 5,827-37 feet, 611 bbls., quarter-inch choke. Quintana Petroleum Co. No. 75 O'Connor, perforated casing 5,876-84 feet, 1,300 bbls., three-eighths inch choke.

Starr County

Sun field: Sun Oil Co. No. 1 Olivarez, perforated casing 4,905-10 feet, 123 bbls., 5/32-inch choke.

Victoria County

Keeran field: Barnsdall Oil Co. No. 2 Keeran, perforated casing 6,995-96½ feet, 46,000 feet of gas, 5/64-inch choke. McFaddin field: Barnsdall Oil Co. No. 9-A McFaddin, sand 4,378-92 feet, 113 bbls., 9/64-inch choke.

Zapata County

Comitas field: Gilcrease Oil Co. No. 40-B Haynes, 1,098 feet, abandoned.

Gulf Coast Fields

(Continued from Page 71)

Matagorda County

North Markham field: Ohio Oil Co. No. 1 Carlson, perforated casing 7,702-08 feet, 150 bbls., one-eighth inch choke.

Tyler County

Spurger field: Republic Production Co. and others No. 14 Hurd, sand 7,600-7,704 feet, 56 bbls., one-fourth inch choke.

Wharton County

Withers field: Smith & McDannald No. 1 Broussard, 5,545 feet, 126 bbls., one-eighth inch choke. Texas Co. No. 1 J. E. Broussard, top sand 5,474 feet, 451 bbls., one-fourth inch choke.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Dec. 5.—West of the proven Turner Valley field, Okalta Oil Co. No. 6, LSD 3, Section 30-18-2w5, which encountered salt water in the Madison limestone at 10,209 feet, is recementing the lower porous zone for a test of the upper porous zone, estimated 75 feet thick. Considerable light crude, reported standing 1,500 feet in the hole, is coming from the upper horizon, which will probably be acidized.

Midway between Okalta No. 6 and Royalite Oil Co. No. 31, the most westerly producer in the main field, Anglo-Canadian Oil Co. No. 1, LSD 16, Section 31-18-2w5, finished in the Madison limestone at 8,222 feet has been acidized and is being given an official production test. Temporary allowable was previously set at 306 bbls., which will likely be increased.

Tests in the Lime

On the West-Central Turner Valley area, Royalite Oil Co. No. 34, LSD 7, Section 5-19-2w5, got the black lime at 7,485 feet and finished at 7,500 feet. It was tubed, and is being tested, with indications of a large producer.

On the west flank of South Turner Valley, West Turner Petroleums No. 3, LSD 6, Section 32-18-2w5, was finished around 7,750 feet, when 3½-inch tubing was run and production tests started.

In Section 29-18-2w5, Command Oils No. 1, LSD 14, got the black lime below 7,844 feet and has run tubing. Command Oils, Ltd., is a subsidiary of Commonwealth Petroleums, Ltd., and location offsets Commoil No. 1 big producer to the east. Early indications are for a large well.

In Section 20-18-2w5, Producers Crude Corp. No. 1, LSD 11, is finishing around 8,030 feet after getting the Madison limestone at 7,585 feet.

North Turner Valley

The most interesting test now nearing completion is Home Oil Co. No. 2 Millarville, in North Turner Valley. Located in LSD 6, Section 33-20-3w5, it is located about a mile north and west of the nearest producers and about 11 miles north and 5 miles west of the nearest producers in the main South Turner Valley crude area. It got the lime at 8,045 feet and is deepening below 8,119 feet in a hard chert formation, with production expected around 8,500 feet.

Turner Valley Royalties

Under the latest proration, Turner Valley Royalties No. 1, LSD 13, Section 28-18-2w5, the pioneer west flank crude producer in South Turner Valley, was given an allowable of 98 bbls. a day. Completed in June, 1936, the well started around 900 bbls., and, after a gradual decline, was later brought back to its original production by acidizing. As the first west flank crude producer, Turner Valley Royalties No. 1 got the benefit of unrestricted flow at its production peak.

West Flank Drilling

In Section 32-18-2w5, British Colonial Oils No. 1, LSD 5, is below 1,666 feet. West Turner Petroleums No. 4, LSD 3, is waiting for rotary outfit, after finishing cellar.

In Section 29-18-2w5, Royalite Oil Co. No. 39, LSD 3, offsetting Consolidated Royalties No. 1 producer to the north, is starting on cellar. P. & H. Development Co. No. 1 Alco, LSD 13, bottoming around 1,435 feet, is cleaning hole preparatory to deepening. Completion of the well is being handled by Lease Holdings, Ltd.

In Section 17-18-2w5,, Extension Royalties No. 1, LSD 14, is in the lower Blairmore formation below 7,000 feet after getting the grit beds marker at 6,020 feet. Anglo-Canadian Oil Co. No. 3, LSD 10, is below 6,522 feet in the Blairmore formation. Anglo-Canadian No. 4, LSD 6, has cellar finished.

In Section 9-18-2w5, D. & D. Oils No. 1, LSD 12, is in the Blairmore formation below 5,750 feet. George Harris and associates No. 1, LSD 13, is rigging rotary outfit, with Snyder & Head handling the drilling contract.

Davies Operations

With three west flank producers completed, Davies Petroleums, Ltd., headed by Maynard J. Davies and financed largely by British Columbia interests is arranging with eastern associates for a further development program. Probable operations include completion of Davies Petroleums No. 3, LSD 7, Section 33-17-2w5, which has been standing for several months with 10¾-inch casing cemented at 3,245 feet. The company also holds acreage in the far north end of Turner Valley, and if Home Oil Co. No. 3 Millarville finished a producer, drilling may be undertaken in that area.

Western Extension

Completion of Anglo-Canadian Oil Co. No. 1 as a satisfactory producer has encouraged additional operations west of the proven crude area. In Section 19-18-2w5, Scottish Petroleums No. 1, LSD 16, is below 2,820 feet and logging satisfactorily.

In Section 18-18-2w5, Inland Development Co. No. 1, LSD 16, is finishing cellar.

In Section 8-18-2w5, Royalite Oil Co. No. 38, LSD 16, is working on cellar.

North Turner Valley

In North Turner Valley, Royalite Oil Co. No. 35, LSD 7, Section 27-20-3w5, is below 6,605 feet after getting the Home sand at 6,107 feet.

East Side Drilling

On the Calling Valley structure, east of Turner Valley, Sentinel Oil Co. No. 1, LSD 15, Section 8-20-2w5, is deepening after getting oil shows in a sand, supposed to be the cardium, between 7,250 and 7,290 feet.

On the Aldersyde structure, Ranchmen's Oil Co. No. 1, LSD 16, Section 13-20-29w4, has cleaned out to bottom at 7,230 feet and is preparing to deepen. It is believed to be in the Dalhousie formation, indicating that the producing horizon in the Madison should be reached in another 1,000 feet. No water has been met since surface water was shut off at 61 feet, but several gas shows were encountered down to 6,263 feet where the grit beds, indicating the top of the Blairmore, were encountered. This horizon showed some white oil. At 6,660 feet another sand was met containing brown crude in bailing quantities; and at 7,230 feet in the Dalhousie a high grade sweet green crude was met, with possibilities of a fair commercial production. The well was started with a comparatively small hole in anticipation of a shallow test.

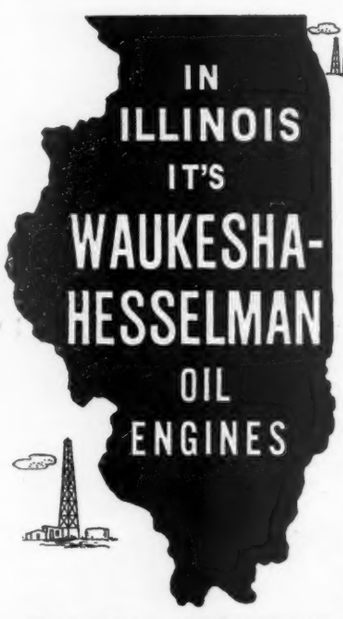
Grease Creek Test

On the Grease Creek structure, west of Olds, Grease Creek Petroleums No. 1 is erecting derrick, and equipment is being moved to location. This is a joint test in which Northwest Co., subsidiary of Imperial Oil, Ltd., will take a 50 per cent interest, the two companies holding almost 15,000 acres on structure. The area was favorably geologized many years ago, when Imperial Oil, Ltd., made a tentative location. Drilling will start just above the cardium sandstone, with the Madison limestone expected around 4,000 feet.

Devonian Lime Prospects

On the Clearwater structure, Altoba No. 1, Section 31-34-9w5, 70 miles west of Innisfail, is below 1,265 feet, with diamond drill cores from 1,196 feet showing much porosity and considerable

(Continued on Page 99)



375,000 ft.—125 wells averaging 3000 ft. each—that's the amount of drilling the Loffland Bros. Co. has already done in the Illinois Basin with their nine rigs powered with Waukesha-Hesselman Oil Engines.

The one of their rigs that is illustrated here, has two Model EKH, 180 hp Waukesha-Hesselman Oil Engines compounded.

Mounted on steel skids . . . easily portable . . . Waukesha-Hesselman Oil Drilling Engines can be rigged up in two to four hours. There's ample power to run good sized mud pumps.

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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S. T. R.	Depth	Status—
Cole, F. E., No. 18 Paderewski, S. Maria, S. Barbara	28-10-34	4,950	sd. sh. drlg.
O'Donnell, J. E., No. 1 Helen, Lompoc, S. Barbara	8- 7-33	4,997	idle
Douglas & Stratton, No. 1 Los Alamos, S. Barbara	8- 8-33	7,002	br. sh. drlg.
Richfield Oil, No. 1 Tinquaic, Foven Can., S. Barb.	36- 9-32	2,196	sd. sh. drlg.
Barnsdall Oil, No. 1 Pezzoni, Gato Ridge, S. Barbara	15- 8-32	4,494	bailed dry
Continental Oil, No. 2 Laguna, Zaca Creek, S. Barb.	25- 8-31	5,682	dry; abd.
General Pet., No. 1 Laguna, Los Olivos, S. Barbara	6- 7-30	3,860	dry; abd.
Oceanic Oil, No. 2 Mesa, S. Barbara Mesa, S. Barb.	28- 4-27	....	material
Ventura Drlg., No. 1 Ojai, Ventura	10- 3-23	1,999	sd. sh. drlg.
High Mesa Oil, No. 1 Butcher, Ojai, Ventura	16- 4-22	1,819	sd. sh. drlg.
Claran Oil, No. 1 Hardison, Sespe, Ventura	22- 4-20	1,660	sd. sh. drlg.
Merchants Pet., No. 8 Hillside, Sespe, Ventura	1- 4-20	1,390	sd. sh. drlg.
Speik Oil, No. 2 Speik, Sespe, Ventura	33- 5-19	3,500	cleaning out
St. Louis Oil, No. 1 Williamson, Sespe, Ventura	1- 4-20	1,644	bailing
Section 20 Oil, No. 1, Sespe, Ventura	20- 5-19	2,362	rd. sd. drlg.
Texas Co., No. 135 Shiells, Shiells Canyon, Ventura	4- 3-19	4,066	flow 110 b.d.
C. C. M. Oil, No. 6-A Hobson, Padre Canyon, Ventura	15- 3-24	3,990	br. sh. drlg.
Ridge Oil, No. 1 Fox, Padre Canyon, Ventura	9- 3-24	7,303	will deepen
C. C. M. Oil, No. 18-B Hobson, Rincon, Ventura	17- 3-24	3,198	sd. sh. drlg.
Tide Water A. O., No. 36 V.L.W., Vent. Ave., Vent.	25- 3-23	7,640	O.S. drlg.
Tide Water A. O., No. 40 V.L.W., Vent. Ave., Vent.	25- 3-23	2,392	sd. sh. drlg.
Tide Water A. O., No. 81 Lloyd, Vent. Ave., Vent.	27- 3-23	7,600	milling 7,360
Tide Water A. O., No. 123 Lloyd, Vent. Ave., Vent.	27- 3-23	3,176	sd. sh. drlg.
Tide Water A. O., No. 126 Lloyd, Vent. Ave., Vent.	27- 3-23	8,674	hd. sh. drlg.
Tide Water A. O., No. 128 Lloyd, Vent. Ave., Vent.	27- 3-23	6,192	hd. sh. drlg.
Tide Water A. O., No. 134 Lloyd, Vent. Ave., Vent.	27- 3-23	8,339	cleaning out
Tide Water A. O., No. 7 Hartman, Vent. Ave., Vent.	22- 3-23	10,570	sd. sh. drlg.
Shell Oil, No. 97 Taylor, Ventura Ave., Ventura	21- 3-23	2,293	sd. sh. drlg.
Shell Oil, No. 32 Edison, Ventura Ave., Ventura	21- 3-23	7,860	sd. sh. drlg.
General Pet., No. 16 Barnard, Ventura Ave., Vent.	21- 3-23	5,449	cleaning out
Brit. Amer. Oil, No. 7 Bolsa, Ventura Ave., Ventura	22- 3-23	3,786	sd. sh. drlg.
Lloyd Corp., No. 2 Dabney-Lloyd, Vent. Ave., Vent.	23- 3-23	7,303	P.B. 7,060
Ventura Expl., No. 1 Sexton, Ventura Ave., Vent.	30- 3-22	9,525	resume work
Belridge Oil, No. 27-4, North Belridge, Kern	27-27-20	7,890	br. sh. drlg.
Belridge Oil, No. 35-26-A, North Belridge, Kern	35-27-20	2,196	sd. sh. drlg.
Belridge Oil, No. 26-25, North Belridge, Kern	26-27-20	5,377	sd. sh. drlg.
Tide Water A. O., No. 22, North Belridge, Kern	21-27-20	8,450	O.S. drlg.
General Pet., No. 2 St. Helens, Belridge, Kern	12-28-20	1,388	pump 30 b.d.
Brown-Saffold Drlg., No. 2 Newbery, Rd. Mt., Kern	32-28-29	2,222	dry; abd.
Richfield Oil, No. 2 Olcese, Rd. Mountain, Kern	17-28-29	2,149	will abdn.
Fuhrman, A., No. 13 Kernco, Kern River, Kern	28-28-28	635	pump 10 b.d.
Hast Oil, No. 5 Kern, Kern River, Kern	34-28-28	445	O.S. drlg.
Barnhart & Morrow, No. 2 Smith, Mount Poso, Kern	34-27-27	1,918	sd. sh. drlg.
Framac Oil, No. 3 Brown, Mount Poso, Kern	22-27-27	1,351	idle
O. F. W. Oil, No. 1 Milburn, Mount Poso, Kern	27-26-28	1,594	sd. sh. drlg.
Federal Drlg., No. 4 B.&G., Mount Poso, Kern	13-26-27	2,115	dry; abd.
Pottenger, F. M., No. 1 Villard, Mount Poso, Kern	2-26-28	569	dry; abd.
Richfield Oil, No. 1, Union Avenue, Kern	5-30-28	8,040	sd. sh. drlg.
O'Reilly, F., No. 1 Berree, Edison, Kern	5-30-29	2,542	P.B. 2,509
Texas Co., No. 1 Lowe, Fruitvale, Kern	7-29-27	10,122	redrlg. 9,170
West. Gulf Oil, No. 40-B, KCL, Fruitvale, Kern	22-29-27	3,811	O.S. drlg.
Renner, G. E., No. 2 R.H.L., Sivert, Kern	27-30-30	2,300	hd. sh. drlg.
Continental Oil, No. 3-A, KCL, Wasco, Kern	8-27-24	13,644	P.B. 10,972
Cal. Lands, Inc., No. 1 Salisbury, Buttonwillow, Kern	7-29-24	8,671	fish D.P.
Superior Oil, No. 3 Ruhl, Rio Bravo, Kern	1-29-25	11,495	flow 2,615 b.d.
Union Oil, No. 7-34, KCL, Rio Bravo, Kern	34-28-25	6,330	sd. sh. drlg.
Getty Oil, No. 3 Ramsey, Rio Bravo, Kern	35-28-25	11,530	flow 6,200 b.d.
General Pet., No. 3 Wagoner, Rio Bravo, Kern	35-28-25	10,004	sd. sh. drlg.
General Pet., No. 4 Van Ness, Rio Bravo, Kern	2-29-25	11,510	flow 3,675 b.d.
Shell Oil, No. 58-8-A, KCL, Famosa, Kern	8-27-26	8,990	sd. sh. drlg.
Standard Oil, No. 2 Fleishauer, Greeley, Kern	20-29-26	11,903	P.B. 11,590
Standard Oil, No. 11-16, KCL, Greeley, Kern	20-29-26	7,990	sd. sh. drlg.
Standard Oil, No. 1 Eirich, Greeley, Kern	20-29-26	9,920	sd. sh. drlg.
Superior Oil, No. 12 KCL, Greeley, Kern	3-30-26	6,374	sd. sh. drlg.
Continental Oil, No. 1-E. KCL, Stevens, Kern	17-30-26	8,574	redrlg. 8,235
Shell Oil, No. 72-29-A, KCL, Ten Section, Kern	29-30-26	8,130	O.S. drlg.
Shell Oil, No. 47-14-A, KCL, Canal, Kern	14-30-25	8,336	sd. sh. drlg.
Shell Oil, No. 87-4-B, KCL, Canal, Kern	4-30-25	9,800	sd. sh. drlg.
Ohio Oil, No. 10-E, KCL, Canal, Kern	14-30-25	1,876	sd. sh. drlg.
Standard Oil, No. 1 Rio Bravo fee, Canal, Kern	12-30-25	7,864	redrlg. 6,198
Richfield Oil, No. 1, KCL, Tupman, Kern	32-30-25	8,677	flow 3,752 b.d.
Wilbent Oil, No. 2 Royer, Midway-Sunset, Kern	7-11-23	9,005	resume work
Standard Oil, No. 223-15-D, Midway-Sunset, Kern	15-32-24	3,280	sd. sh. drlg.
Fried, Julius, No. 1 Fried, Midway-Sunset, Kern	34-32-24	5,035	br. sh. drlg.
Texas Co., No. 102 Midway, Midway-Sunset, Kern	36-31-22	1,070	pump 70 b.d.
National Oil, No. 31 Midway, Midway-Sunset, Kern	35-32-23	1,450	br. sh. drlg.
Richfield Oil, No. 1, KCL, Wheeler Ridge, Kern	28-11-20	8,450	sd. sh. drlg.
Tide Water A. O., No. 2 S.P., Tejon Ranch, Kern	15-11-19	3,370	sd. sh. drlg.
Tide Water A. O., No. 1-F, North Coalinga, Kresno	1-19-15	6,570	sd. sh. drlg.
Pet. Sec., No. 88-7-F, East Coalinga, Fresno	7-20-16	7,993	O.S. drlg.
Pet. Sec., No. 31-18-F, East Coalinga, Fresno	18-20-16	7,475	flow 10,000 b.d.
Standard Oil, No. 1-17-F, fee, East Coalinga, Fresno	17-20-16	5,260	sd. sh. drlg.
Superior Oil, No. 1 Cagle, East Coalinga, Fresno	6-20-16	3,487	sd. sh. drlg.
Superior Oil, No. 2 fee, East Coalinga, Fresno	7-20-16	6,480	sd. sh. drlg.
Jarvis, L. F., No. 2 fee, West Coalinga, Fresno	14-20-14	120	hd. sd. drlg.
Pierce, C., No. 1 Shorb, Panoche, Fresno	16-14-12	1,507	hd. sd. drlg.
Dauphin Dev., No. 2 Boone, Alcalde, Fresno	30-21-14	4,470	gr. sh. drlg.
Stuart Oil, No. 1 Alcalde, Alcalde, Fresno	12-21-14	994	sd. sh. drlg.
Union Oil, No. 4 King, Kettleman North, Fresno	29-21-17	8,520	fish D.P.
K.N.D.A., No. 27-8-Q, Kettleman North, Kings	6-22-18	8,710	flow 1,450 b.d.
K.N.D.A., No. 6-16-Q, Kettleman North, Kings	16-22-18	5,271	sd. sh. drlg.
K.N.D.A., No. 36-16-Q, Kettleman North, Kings	16-22-18	7,885	completing
K.N.D.A., No. 65-20-Q, Kettleman North, Kings	20-22-18	7,387	gr. sd. drlg.
KN.D.A., No. 36-22-Q, Kettleman North, Kings	22-22-18	4,997	sd. sh. drlg.
Standard Oil, No. 46-13-H, Kettleman North, Fresno	13-21-16	11,030	sd. sh. drlg.
Standard Oil, No. 56-1-P, Kettleman North, Kings	1-22-17	5,398	sd. sh. drlg.
Standard Oil, No. 21-13-P, Kettleman North, Kings	13-22-17	9,097	sd. sh. drlg.
Standard Oil, No. 76-7-Q, Kettleman North, Kings	7-22-18	4,532	sd. sh. drlg.
Standard Oil, No. 41-17-Q, Kettleman North, Kings	17-22-18	7,860	completing
Standard Oil, No. 61-21-Q, Kettleman North, Kings	21-22-18	7,960	O.S. drlg.
Tannehill, L. B., No. 1 Reliz, King City, Monterey	36-20- 8	2,580	sd. sh. drlg.
Cal. Pet. Prod., No. 1 Irons, Cuyama, San L. Obispo	19-10-24	1,720	resume work
Epco, Inc., No. 1 Ajax, Union, San Luis Obispo	27-26-13	2,040	sd. sh. drlg.
Richfield Oil, No. 1, Potrero Hills, Salona	10- 4- 1	5,334	P.B. 3,150

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S. T. R.	Depth	Status—
Mojave Pet., No. 1 Hillside, Gorman, Los Angeles	5- 8-18	477	sd. sh. drlg.
Texas Co., No. 1 Anderson, Ocean Park, L. A.	17- 2-15	6,960	sd. sh. drlg.
Rolling Hills Pet., No. 1 Weston, Palos Verdes, L. A.	27- 4-14	5,100	will test
Amron Oil, No. 1 Lomita, Torrance, Los Angeles	23- 4-14	4,210	will P.B.
Alford Oil, No. 11 Lomita, Torrance, Los Angeles	23- 4-14	4,641	sd. sh. drlg.
Andrews, W. P., No. 10 Kirk, Torrance, Los Angeles	23- 4-14	4,697	sd. sh. drlg.
Colma Oil, No. 1 Smith, Torrance, Los Angeles	10- 4-14	5,084	dry; abd.
H. D. Oil, No. 1 Lomita, Torrance, Los Angeles	23- 4-14	3,807	rigged up
Hart Pet., No. 1 Neher, Torrance, Los Angeles	23- 4-14	3,800	cleaning out
Kerben Oil, No. 2 Empire, Torrance, Los Angeles	23- 4-14	4,985	pump water
Kern Pet., No. 1-A Madden, Torrance, Los Angeles	23- 4-14	3,793	sd. sh. drlg.
Louisiana Oil, No. 2 Lord, Torrance, Los Angeles	23- 4-14	5,143	O.S. drlg.
Mallon, Felix, No. 2 Martner, Torrance, L. A.	23- 4-14	4,660	sd. sh. drlg.
Marilou Oil, No. 1 Lomita, Torrance, Los Angeles	23- 4-14	2,884	sd. sh. drlg.
Medill, John, No. 4 Frenger, Torrance, Los Angeles	9- 4-14	3,595	rigged up
Paso Oil, No. 1 Lyle, Torrance, Los Angeles	22- 4-14	4,690	sd. sh. drlg.
Plymouth Oil, No. 1 Lomita, Torrance, Los Angeles	23- 4-14	4,378	sd. sh. drlg.
Moon Oil, No. 1 Beaver, Torrance, Los Angeles	23- 4-14	5,083	cleaning out
Russell, T., No. 2 Clarke, Torrance, Los Angeles	23- 4-14	5,122	O.S. drlg.
Standard Oil, No. 1-1 Marble, Torrance, L. A.	15- 4-14	4,810	O.S. drlg.
Standard Oil, No. 1-2 Marble, Torrance, L. A.	15- 4-14	3,828	will deepen
Standard Oil, No. 2-11 Marble, Torrance, L. A.	22- 4-14	4,810	sd. sh. drlg.
Westside Oil, No. 1 Exeter, Torrance, L. A.	23- 4-14	3,835	will deepen
Wilson, Ray, No. 1 Lomita, Torrance, L. A.	23- 4-14	3,990	sd. sh. drlg.
Woolner Oil, No. 2 Lomita, Torrance, L. A.	23- 4-14	3,816	redrlg. 3,264
West Basin Oil, No. 1 Eyster, Torrance, L. A.	23- 4-14	3,775	cleaning out
C. C. M. O., No. 15, Torrance, Los Angeles	14- 4-14	4,286	sd. sh. drlg.
C. C. M. O., No. 18, Torrance, Los Angeles	14- 4-14	5,010	tested wet
Bush Oil, No. 1 Torino, Harbor City, Los Angeles	25- 4-14	5,947	will P.B.
D. & B. Oil, No. 2 Lomita, Harbor City, Los Angeles	25- 4-14	4,797	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., line.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P B., plugging or plugged back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shut off O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

General Pet., No. 11 Poggi, Harbor City, L. A.	25-	4-14	5,220	flow 405 b.d.
General Pet., No. 12 Poggi, Harbor City, L. A.	25-	4-14	5,100	will P.B.
Macrate, A. N., No. 1-1 Kupfer, Harbor City, L. A.	25-	4-14	5,272	P.B. 5,245
Macrate, A. N., No. 1 Holden, Harbor City, L. A.	25-	4-14	5,303	O.S. drlg.
O'Donnell, J. L., No. 44 Oakley, Harbor City, L. A.	30-	4-13	2,975	sd. sh. drlg.
Padran Oil, No. 1 McEwen, Harbor City, L. A.	25-	4-14	5,304	pump 150 b.d.
Richfield Oil, No. 1 Capitol, Harbor City, L. A.	30-	4-13	4,996	sd. sh. drlg.
Texas Co., No. 2 Oakley, Harbor City, Los Angeles	30-	4-13	4,570	sd. sh. drlg.
West. Talc. Co., No. 1 Pierce, Harbor City, L. A.	25-	4-14	5,325	pump water
Union Oil, No. 65 Callender, Dominguez, L. A.	32-	3-13	4,780	sd. sh. drlg.
Union Oil, No. 49 Hellman, Dominguez, Los Angeles	33-	3-13	8,153	sd. sh. drlg.
Shell Oil, No. 11 Reyes, Dominguez Los Angeles	33-	3-13	4,223	redrlg. 3,587
Richfield Oil, No. 1 Estate, Dominguez, L. A.	2-	4-13	5,294	sd. sh. drlg.
Entrikin, W. E., No. 1-D West, Athens, Los Angeles	7-	3-13	4,285	sd. sh. drlg.
Fairfield, F. E., No. 1 Abel, Rosecrans, Los Angeles	19-	3-13	7,550	sd. sh. drlg.
O'Donnell, J. L., No. 46 Mail, Rosecrans, Los Angeles	19-	3-13	5,186	sd. sh. drlg.
Bankline Oil, No. 1 Kirby, Rosecrans, Los Angeles	20-	3-13	7,655	redrlg. 6,998
Barnsdall Oil, No. 10 Rosecrans, Rosecrans, L. A.	20-	3-13	8,572	will P.B.
Union Oil, No. 27 Rosecrans, Rosecrans, L. A.	19-	3-13	6,250	sd. sh. drlg.
Universal Consd., No. 6 Trust, Rosecrans, L. A.	18-	3-13	7,575	tested wet
Republic Pet., No. 1 Trust, Rosecrans, Los Angeles	18-	3-13	7,571	P.B. 7,537
Superior Oil, No. 12 Maxwell, Rosecrans, L. A.	19-	3-13	7,724	flow 901 b.d.
Hydrocarbon Prod., Inc., No. 1 Cole, Rosecrans, L. A.	19-	3-13	5,184	sd. sh. drlg.
West. Gulf Oil, No. 1 Bagg, Rosecrans, Los Angeles	17-	3-13	7,594	sd. sh. drlg.
Basin Oil, No. 2 Club, Potrero, Los Angeles	34-	2-14	6,035	flow 405 b.d.
Barnsdall Oil, No. 4 R.S.F., Newhall, Los Angeles	26-	4-17	6,740	O.S. drlg.
Continental Oil, No. 1 R.S.F., Newhall, Los Angeles	20-	4-17	2,430	sd. sh. drlg.
Newhall Associates, No. 4 Needham, Newhall, L. A.	13-	3-16	3,504	redrlg. 2,680
Standard Oil, No. 1 Ward, Newhall, Los Angeles	27-	3-16		bldg. road
Mojave Pet., No. 2 Jennings, Newhall, Los Angeles	33-	5-14	200	sd. sh. drlg.
Mangrum & Page, No. 1 Lintz, Newhall, L. A.	4-	3-15	100	hd. sd. drlg.
O'Donnell, J. E., No. 1 Hammond, Newhall, L. A.	8-	3-16	4,305	resume work
Royal Lands, No. 1 Ramona, Castaic, Los Angeles	8-	4-17	1,320	sd. sh. drlg.
General Pet., No. 4 Blinn, Wilmington, L. A.	35-	4-13	2,870	sd. sh. drlg.
General Pet., No. 30 Harbor, Wilmington, L. A.	2-	5-13	2,522	sd. sh. drlg.
General Pet., No. 31 Harbor, Wilmington, L. A.	2-	5-13	3,470	O.S. drlg.
Allied Pet., No. 30 Harbor, Wilmington, L. A.	35-	4-13	3,086	sd. sh. drlg.
Bond Pet., No. 1 Mutual, Wilmington, Los Angeles	35-	4-13	3,288	pump 230 b.d.
Dunlap, D. D., No. 4-W, Wilmington, Los Angeles	32-	4-13	3,580	sd. sh. drlg.
Getty Oil, No. 4-W, Wilmington, Los Angeles	33-	4-13	5,693	sd. sh. drlg.
Hollywood Oil, No. 5 Baxter, Wilmington, L. A.	33-	4-13	2,690	sd. sh. drlg.
Master Pet., No. 1 Chuck, Wilmington, Los Angeles	35-	4-13	5,130	sd. sh. drlg.
Pacific West. Oil, No. 1 Comm., Wilmington, L. A.	33-	4-13	5,690	rig to pump
Union Pacific R. R., No. 94, Wilmington, L. A.	4-	5-13	5,020	O.S. drlg.
Union Pacific R. R., No. 100, Wilmington, L. A.	3-	5-13	2,557	sd. sh. drlg.
Union Pacific R. R., No. 2-EU, Wilmington, L. A.	34-	4-13	3,592	O.S. drlg.
Union Pacific R. R., No. 3-EU, Wilmington, L. A.	34-	4-13	2,961	sd. sh. drlg.
Universal Consd., No. 6 Newport, Wilmington, L. A.	2-	5-13	2,690	sd. sh. drlg.
Grady, R. T., No. 1 Associates, San Pedro, L. A.	23-	5-14	440	sd. sh. drlg.
Hogan Pet., No. 2 Burkhard, San Pedro, L. A.	6-	5-13	2,852	sd. sh. drlg.
Olympic Refining, No. 1 Smith, Montebello, L. A.	2-	2-12	2,938	sd. sh. drlg.
St. Helens Pet., No. 29 Monterey, Montebello, L. A.	2-	2-12	6,590	sd. sh. drlg.
Standard Oil, No. 3 Braun, Montebello, Los Angeles	2-	2-12	6,700	completing
Union Oil, No. 1 Calkins, Montebello, Los Angeles	2-	2-12	3,590	sd. sh. drlg.
Union Oil, No. 4 Howard & Smith, Montebello, L. A.	2-	2-12	730	sd. sh. drlg.
Pongratz Pet., No. 1 Martin, Montebello, L. A.	2-	2-12	6,710	C.P. 6,635
V-8 Oil, No. 1 Estelle, Montebello, Los Angeles	2-	2-12	6,687	sd. sh. drlg.
Mont. Res. Oil, No. 1 M.L.&W., Montebello, L. A.	2-	2-12	6,715	O.S. drlg.
Mont. Wesco, Inc., No. 1 Mont., Montebello, L. A.	2-	2-12	6,458	will deepen
Brookline Oil, No. 1 Drake, Montebello, L. A.	2-	2-12	6,705	completing
Texas Co., No. 6 Baldwin, Santa Fe Springs, L. A.	6-	3-11	4,143	sd. sh. drlg.
Caminol Co., Ltd., No. 2-10, North Long Beach, L. A.	13	4-13	7,535	cleaning out
Johnston Drlg., No. 36, North Long Beach, L. A.	13-	4-13	4,437	sd. sh. drlg.
Massey & Asso., No. 1 Taylor, Long Beach, L. A.	19-	4-12	4,475	sd. sh. drlg.
De Soto Oil, No. 1 Signal, Long Beach, Los Angeles	30-	4-12	10,093	testing
Parry & Co., No. 1 Associates, Long Beach, L. A.	19-	4-12	2,598	sd. sh. drlg.
Brea Canyon Oil, No. 49 Brea, Brea Canyon, Orange	2-	3-10	2,483	hd. sd. drlg.
Shell Oil, No. 20 Orange, Brea Canyon, Orange	2-	3-10	5,470	sd. sh. drlg.
Battersby, J. M., No. 1 Associates, Carmenita, Orange	21-	3-11	8,956	gr. sh. drlg.
Graham-Loftus Oil, No. 2 Perkins, E. Coyote, Orange	13-	3-10	3,386	P.B. 3,360
Bartholomae Oil, No. 7 Sterns, E. Coyote, Orange	22-	3-10	4,800	sd. sh. drlg.
Shell Oil, No. 1 Dunford, Richfield, Orange	22-	3- 9	1,186	sd. sh. drlg.
J. E. F. Oil, No. 1 Bruce, Huntington Beach, Orange	36-	5-11	4,460	sd. sh. drlg.
Southwest Expl., No. 1 State, Hunt. Beach, Orange	10-	6-11	4,296	pump 150 b.d.
Southwest Expl., No. 2 State, Hunt. Beach, Orange	10-	6-11	4,260	pump 120 b.d.
Southwest Expl., No. 3 State, Hunt. Beach, Orange	10-	6-11	2,990	sd. sh. drlg.
Southwest Expl., No. 4 State, Hunt. Beach, Orange	10-	6-11	386	sd. sh. drlg.
Shell Oil, No. 1 Irvine, Del Mar, Orange	6-	7- 9	1,930	sd. sh. drlg.
A. V. Oil, No. 1 Newport, Costa Mesa, Orange	16-	6-10	4,751	idle
Dauphin Dev., No. 1 Irwin, Ponto, San Diego	16-12-	4	806	sd. sh. drlg.
Palm City Oil, No. 1 Palm City, San Diego	21-18-	2	181	sd. sh. drlg.

KANSAS

Week Ending December 3 (Descriptions are East unless marked otherwise)

Barton County

C. L. Carlock and Atlantic Ref. Co. No. 1 Demel, NE NW Sec. 30-17-13w. Drlg. 3,120 ft.

Long & Johnson No. 1 Eveleigh, SW SW NE Sec. 3-18-14w. Lansing 3,100 ft.; U.R. 3,166 ft.

I. W. Murfin No. 1 Birzer, NE SW Sec. 21-19-11w. Drlg. 1,820 ft.

Newton & Clyde Pulse No. 1 Hagen, SW Sec. 20-20-11w. R.U.S.T. 3,326 ft.

Sinclair-Prairie No. 1 Prusa, SE SE SE Sec. 20-16-11w. Arb. 3,335-52 ft.; T.D.

Virginia Drlg. Co. No. 1 Clawson, SW NW Sec. 17-20-11w. Drlg. 2,400 ft.

Butler County

Stewart & Gross No. 1-A Semisch, NW SE SW Sec. 34-27-7. Pay 2,788-2,800 ft., T.D.; acd. and P. 15 B.O.P.D.; comp.

Cowley County

Ben Gralapp et al No. 1-A Clark, NW NW NE Sec. 11-31-3e. S.D. 3,248 ft.

Dickinson County

Franks et al No. 1 Huffman, NW SW Sec. 11-13-1. Rng. 10-in. 1,177 ft.

Ellis County

Cities Service No. 1 Hall "D," C NW Sec. 2-12-17w. Drlg. 2,400 ft.

Darby Pet. No. 1 Peavey, NW NE Sec. 24-11-18w. W.O.C. 2,830 ft.

Greenwood County

Z. Dunlap et al No. 1 Warren, NW NW SW Sec. 4-28-10. T.D. 2,224 ft.; D.&A.

Russell B. Reed No. 1 Shell, NW SE Sec. 17-28-11e. Rng. csg. 1,200 ft.

Harvey County

Derby Oil and Gary Drlg. Co. No. 1 Jones, CEL NE NW Sec. 7-22-1w. T. D. 3,546 ft.; P.B. 3,300 ft.; drld. to 3,192 ft.; 1,400 ft. O.I.H.

Lanahan Drlg. No. 1 Lagree, SE SE Sec. 4-23-3w. T.D. 280 ft.; S.D.

Kingman County

Bunte Bros. No. 1 Shepard, SE SE SE Sec. 10-27-10w. T.D. 4,529 ft.; P.B. 4,086 ft.; acd. and p. 30 B.O. and 20 B.W. in 12 hrs.

Duwe & Farris No. 1 Kimminan, NE NW SW Sec. 12-30-9w. Drlg. 3,230 ft.

McPherson County

Marylyn Oil No. 1 Dixon, NW NE NW Sec. 7-19-2w. Drlg. 2,927 ft.

Western Kans. O. & R. Co. No. 1 Union, NW NE SW Sec. 18-17-1w. T.D. 2,689 ft.; P. 139 B.O. in 8 hrs.; pot. 419 B. O.P.D.

Marion County

Cox & McGinnis and Saco Oil Co. No. 1 Jolliffe, C S½ SW SE Sec. 2-22-5. C.O. 2,060 ft.

Johnson et al No. 1-A Miltz, SW SW SW Sec. 24-17-4. T.D. 2,300 ft.; C.O.

Mead County

Cragin, Reeuscher & Turner No. 1 Adams, NW NW SE Sec. 22-34-30w. T.D. 200 ft.; R.U.R.

Pacific Midwest Oil No. 1 Rexford, NE SE SW Sec. 8-30-29w. S.D. 1,435 ft.

Ness County

C. L. Carlock and F. P. Cullum No. 1 Smith, C SW SE Sec. 11-17-25w. S.O. 4,365 ft.; drlg. 4,655 ft.

Ottawa County

Babcock Oil No. 1 Copeman, NW NW Sec. 18-10-2w. C.O. 2,842 ft.

Pratt County

Champlin Ref. Co. No. 1 Elliott, SW NE Sec. 26-27-14w. Fsg. 4,857 ft.

Rice County

Cities Service No. 1 DeWitt, CSL NE Sec. 33-19-9w. Drlg. 740 ft.

Cities Service No. 1 Murphy, CWL NE Sec. 9-19-9w. W.O.C. 247 ft.

Garden Prod. L. Werner, NE NE NE Sec. 10-21-9w. Drlg. 1,550 ft.

Spurrier & Bruce No. 1 Cary, NE NW NW Sec. 30-18-8w. O.W.D.D.; O.T.D. 1,530 ft.; S.D. 1,680 ft.

J. H. Tatlock No. 1 L. C. Proffitt, SW SE SW Sec. 12-20-10w. Drlg. 2,850 ft.

J. H. Tatlock No. 1 R. P. Proffitt, SW NE Sec. 23-20-10w. Drlg. 3,382 ft.

Rooks County

Phillips Pet. Co. No. 1 Tanzey, C NW SW Sec. 25-8-18w. Arb. 3,418-3,423 ft., R.U.S.T. 3,423 ft.

Russell County

K. F. Nelson No. 1 Polcyn, SW Sec. 31-13-15w. Drlg. 1,900 ft.

Phil-Han No. 1 Weimeister, SW Sec. 18-14-13w. Drlg. 2,980 ft.

W. I. Southern No. 1 Sellens, SW cor Sec. 22-15-13w. Arb. 3,352-54 ft.; shot 3,188-96 ft.

Yankey & Stearnes No. 1 Krog, NW SE NW Sec. 7-15-13w. Top pay 3,324-27 ft., T.D.; swb. 5 B.O.P.H.

Saline County

Central States Oil Co. No. 1 Crawford, NW SW NE Sec. 26-13-3w. Drlg. 1,100 ft.

Sedgwick County

Frank Hudson et al No. 1 Fulton, NE SE Sec. 35-28-1e. U.R. 2,356 ft.

Stafford County

Stanolind O. & G. Co. No. 1 Curtis, SE cor. Sec. 31-21-12w. Viola 3,544 ft.; Arb. 3,638 ft.; R.U.S.T. 3,640 ft.

Sumner County

Cameron & Spencer No. 1 Frey, NW cor. Sec. 5-30-1e. Fsg. 3,150 ft.

Earl Henderson No. 1 King, NE NE NE Sec. 22-31-4. Drlg. 1,400 ft.

Wabaunsee County

Fowler & Tague et al No. 1 Aye, NW SW NW Sec. 10-12-8. S.D. 300 ft.

Woodson County

Monarch Royalty No. 1 Central Life Ins., SE NW NW Sec. 29-26-14. T.D. 1,514 ft.; D.&A.

M. J. Trott No. 1 Abbott, NW NE NE Sec. 21-25-14e. Drlg. 1,325 ft.

OKLAHOMA

Week Ending December 3

NORTHERN OKLAHOMA

Caddo County

Texas Co. No. 1 Smith, C NE NW Sec. 2-5-12w. T.D. 2,556 ft.; S.D.O.

Cleveland County

Big Chief and Gulf No. 1 Stratiger, NW NW SW Sec. 25-9-2w. T.D. 7,179 ft.; drlg. cmt.

Burke-Greis No. 1 Alberts, SE SW NW Sec. 19-7-1w. Drlg.

Harper, Turner et al No. 1 Taylor, SE NE NW Sec. 23-8-2w. Drlg. 4,012 ft.

Nels-Burrton No. 1 Hirsch, NW NW NE Sec. 17-9-2w. O.W.P.B.; O.T.D. 7,692 ft.; T.D. 7,661 ft.; to swb.

Coal County

Patsy Oil Co. No. 1 Spence, NW SE SE Sec. 19-2-8. Drlg. 3,370 ft.

Garfield County

Champlin Ref. Co. No. 1 Boehm, SW SW NE Sec. 4-24-8w. Viola 6,595 ft.; dolo. 6,625 ft.; 1st Wilcox 6,658 ft.; dry; 2nd Wlx. 6,690 ft.; F. 307 B.O. and 292 B.W. in 24 hrs.

Garvin County

H. R. Hollenbach et al No. 1 Butterly, NE NE SE Sec. 22-1n-1e. 3,218,000 ft. gas; drlg. 3,205 ft.; S.D.; repairs.

Grady County

Carter Oil Co. et al No. 1 Smith C-58, C SE SW Sec. 26-5-8w. S.S.O. 5,329-58 ft.; cg. 5,399-5,409 ft.; S.O. 5,433 ft.; T.D. 5,543 ft.

Greer County

S. T. Moore No. 1 Graumann, NE NW NW Sec. 11-5-21w. T.D. 550 ft.; S.D.

Hughes County

City of Holdenville No. 1 Fairgrounds, SE SE SE Sec. 13-7-8. S.D. at 1,200 ft.

Homer Doup et al No. 1 Bond, NE NE SW Sec. 7-7-9. S.D. 3,098 ft.

Phillips Pet. Co. No. 1 Mandler, SE SW SW Sec. 1-6-10. Drlg. 4,560 ft.

Jackson County

Lippert No. 1 Howard, NE SW NW Sec 10-3-19w. O.W.D.D. T.D. 1,510 ft.; S.D.

Kay County

Crawford No. 1 Boehl, SE SE NW Sec 34-27-2w. S.D. 1,000 ft.

E. W. Hamilton No. 1 Riddle, NW cor Sec. 3-26-4. Miss. 3,325 ft.; T.D. 3,356 ft.; D.&A.

Tide Water Oil Co. No. 1 Hockman, NW NW NE Sec. 19-28-1. Wlx. 3,288 ft.; Arb. 3,421 ft.; P.B. to 3,322 ft.; rec. S.W. and P.B. to 2,222 ft.

Kingfisher County

Burton Pet. Corp. No. 1 Zerger, C SE SW Sec. 5-18-6w. S.D. at 3,510 ft.; lost cones.

Kiowa County

Crawford & Zelliff No. 1 Kimray, SW SW NW Sec. 36-5-18w. S.D. 354 ft.

R. L. Emerson No. 1 Handcock, SE SE NE Sec. 26-6-15w. Drlg. 497 ft.

Hughes & Reese No. 1 Fultz, SE SE SE Sec. 10-6-18w. T.D. 1,238 ft.; W.O.C.

Noble County

H. R. Hollenbach No. 1 Mathews, C SW NW Sec. 9-20-1. Viola 5,130 ft.; Wlx. 5,213 ft.; T.D. 5,225 ft.; S.D.O.

Phillips Pet. Co. No. 1-A Robertson, NW NE SW Sec. 29-24-1w. Drlg. 4,442 ft.

Okfuskee County

Lease Inv. Co. No. 1 fee, SE SW SE Sec 21-13-10. T.D. 3,615 ft.; P.B. 3,612 ft.; P. 110 B.F. in 12 hrs.

Mead Prod. Co. No. 1 Pine, SW SW NW Sec. 14-12-11. T.D. 2,845 ft.; U.R.

Okmulgee County

Jim Wise Drlg. Co. No. 1 Morrow, SW NW NE Sec. 16-15-13. S.D.; wtr. 160 ft.

Pawnee County

Ed Kelly No. 1 Hill, SW SW SE Sec. 1-21-5. S.D. wtr. 1,110 ft.

Payne County

Roy Starr No. 1 McKenzie, SW SW NE Sec. 13-18-3. Drlg. 3,047 ft.

Pittsburg County

Supreme Oil Corp. No. 1 Hickey, NW SW NW Sec. 4-2-15. T.D. 1,040 ft.; S.D.

Supreme Oil Corp. No. 1 Stevenson, SW SW SE Sec. 27-3-14. T.D. 1,300 ft.; M.I. rotary.

Pontotoc County

J. L. Casey No. 1 Pace, SW SW NE Sec. 14-2-7. S.D. 399 ft.; repairs.

Jack Lynch et al No. 1-A Parker, SW SW SE Sec. 17-4-8. T.D. 4,572 ft.; P.B. 4,490 ft.; rip in csg.; P.B. 4,090 ft.; S.D.

H. Z. Moore No. 1 Payne, SE NW SE Sec. 16-4-4. T.D. 997 ft.; S.S.O.; S.D.

Union Dev. Co. No. 1-A Abbott, SW NW NE Sec. 34-3-6. Drlg. 3,960 ft.

Pottawatomie County

Hall & Briscoe No. 1 Merkle, NW NW SE Sec. 32-8-5. 1st Wlx. 4,385 ft.; 2nd 4,460 ft.; T.D. 4,476 ft.; P.B. 4,386 ft.; P. 6 B.O. in 24 hrs.; S.D.O.

Seminole County

Lesslie Rogers No. 1 Kidd, NE SW SE Sec. 33-10-8. T.D. 200 ft.; S.D.

W. C. Wood No. 1 Aldridge, SW NW NE Sec. 5-8-8. Drlg. 250 ft.

Texas County

Republic Nat. Gas Co. No. 1 Dulabohn, C Sec. 21-6n-15ecm. Drlg. 2,365 ft.

Republic Nat. Gas Co. No. 1 Judd, CSL SW Sec. 24-6n-15ecm. T.D. 2,870 ft.; gas 7,100,000 ft.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Sec. 28-10-20w. Drlg. 9,951 ft.

L. B. McWhirter No. 1 fee, NW SW SW Sec. 34-8-19w. Drlg. iron 2,186 ft.

SOUTHERN OKLAHOMA

Carter County

Pure Oil Co. No. 1 Noble, NE SE Sec. 35-3s-1e. Drlg. blk. sh. 2,915 ft.

Producers No. 1 Ham (O.W.D.D.), SW NW Sec. 25-7-19w. O.T.D. 1,800 ft.; C.O. 2,500 ft.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW Sec. 21-7s-15. Drlg. sdy. L. 1,300 ft.

Tillman County

Smith No. 2 Hammel, NE NW NW sec 6-5s-15w. T.D. 2,380 ft.; recvd. D.P. and S.D.

Cotton County

Jim Turner No. 5 Collins, C NE NE Sec. 18-4s-10w. T.D. 1,309 ft.; S.D.O.

LOUISIANA

N. LOUISIANA WILDCATS

Bienville Parish

Ark.-La. Gas Co. No. 1-B Davis Bros. Lbr. Co., NW SW Sec. 7-16-4. 9⅝-in. csg. 2,557 ft.; D.S.T. 5,845-76 ft.; 50,000,000 ft. gas; open flow; 10 min.; ¼-in. cks. T.&B.; B.M.A. 5,640 ft.; b. stringer anhy. 5,753 ft.; D.S.T. 6,185-6,203 ft.; tstd. 1,530 ft. S.W. 16 min.; ¼-in. cks. T.&B.; top Pettit L. 6,706 ft.; no por.; top Tr. Pk. 7,047 ft.; gas sd.; cd. 7,171-93 ft.; 5½-in. csg. 7,166 ft.; T.D. 7,201 ft. Tstd. S.W., 7,201 ft. and P.B. 7,130 ft.; perf. 6,860-80 and 6,900-30 ft. Used 2,000 gallons acid and tstd. S.W. P. B. 6,800 ft. and arng. perf. T.D. 7,201 ft.

Producers O. & G. Co. No. 1 Graves & Thomas, SE cor. SW SE Sec. 23-15-10. Set 13⅜-in. 180 ft.

Bossier Parish

W. M. Chambers No. 1 Thomas, SE cor Sec. 10-22-11. S.D. T.D., sh. 3,197 ft.

H. M. Harrell et al No. 1 Edwards Est. Unit, Sec. 5-17-11. Drlg. L.&sh. 4,850 ft.

Premier Inv. Co. No. 1 McDade, SE SW NE Sec. 28-19-11. T.D. 2,384 ft.; acd. with 1,000 gal.; csg. seat gave away hole full S.W.; 5½-inch csg., 2,342 ft. W.O.C. 2,384 ft.

J. B. Stovall et al No. 5 Ark. Fuel fee, SE cor. NE SE Sec. 15-19-11. Set 6-in. csg. 364 ft.; T.D. 365 ft.; comp. pmpg. 12 b.p.d. 373 ft.

Caddo Parish

C. L. Ablinger No. 1 Gregory, NE cor. Sec. 3-20-11. 6-in. 960 ft.; W.O.S.R. 971 ft.

C. L. Ablinger No. 2 Gregory, NW cor. NE Sec. 3-20-16. 10-inch 42 ft. Drlg. sh. 421 ft.

R. E. Allison No. 3 Ellerbe, NE cor. Sec. 28-18-14. Loc.

R. E. Allison No. 4 Ellerbee, C NW NE Sec. 34-18-14. 13⅜-inch csg., 235 ft.

R. E. Allison No. 5 Ellerbee, C NE NE Sec. 34-18-14. R.U.

R. E. Allison No. 1 Jones & Mabry Unit, SE Sec. 21-18-14. Drlg. L.&sh. 3,850 ft.

Ark.-La. Gas Co. No. 1 Webb, C NW SW Sec. 4-16-13. 9⅝-in. csg. 1,236 ft.; cg. L. 5,609 ft.

Carney et al No. 3 Hart, SE NW Sec. 21-21-16. Drlg. sd. 600 ft.

W. D. Chew No. 6 Stiles, SW NE Sec. 28-21-16. Set 6-in. csg. 1,945 ft.; T.D. 1,954 ft.; tstd. S.W. 1,954 ft. and P.B. 1,944 ft.; drld. out to 1,954 ft.; tstd. S.W.; W.O. 1,954 ft.

Colonial Corp. No. 1 Thigpen-Herold, 330 ft. S and W, C Sec. 34-22-16. Drlg. sh.&A. 4,260 ft.

Paul Cooper No. 2 Stiles, SW SE Sec. 28-21-16. Set 6-in. csg. 1,542 ft.; used 1,500 gal. acd. and tstd. dry; tstg. 1,851 ft.

J. P. Driscoll et al No. 1 Woolworth, SE cor. Sec. 26-20-15. Set 16-in. csg. 208 ft.

Eagle Prod. Co. No. 1 Means, SE cor. NE Sec. 9-23-15. Drlg. sh.&L. 3,400 ft.

G. W. Gibson No. 3 Muslow, NW cor. Sec. 6-20-15. Set 7-in. csg. 1,354 ft. Used 1,500 gal. acd. W.O.S.R. 1,570 ft.

G. W. Gibson No. 4 Muslow, NW cor. Sec. 6-20-15. 10-in. csg. 62 ft.; 7-in. csg. 1,354 ft. W.O.S.R.

Harry Hanbury No. 1 Lowe, et al, SE cor., SW Sec. 23-18-14. Drlg. sh. 1,265 ft.

H. C. Prod. Co. No. 1 Kinnebrew & Ratcliff, NE cor. Sec. 5-19-16. R.U.

C. D. Loe No. 1 Meyer, SE cor. Sec. 33-18-14. Top Pettit 5,592 ft.; T.D. 5,628 ft.; perf. 5,602-25 ft. and tstd. S.W.; P.B. 5,611 ft.; 5½-in. csg. 5,627 ft.; T D. 5,631 ft.; P.B. 5,583 ft.; drld. out to 5,610 and perf. 5,602-05 and tstd. S.W.; perf. 5,553-57 ft.; tstd. csg. and perf. 5,592-95 ft. Set tbg. with packer 5,600 ft. and tstg. T.D. 5,610 ft. O.T.D. 5,631 ft.

McDonald & Campbell No. 2 Burton, NW cor. Sec. 7-20-15. 10-in. 42 ft.

Manziel et al No. 2 Muslow, NW SW Sec. 6-20-15. 6⅝-in. csg. 1,355 ft.; comp. 65 b.p.d. 2-in. tbg. T.D 1,570 ft.

Manziel et al No. 3 Muslow, NW SW Sec. 6-20-15. Drlg. 250 ft.

Manziel et al No. 3 Ramsey, NE SE Sec. 32-21-15. Set 5½-in. csg. 1,348 ft.; acd with 2,000 gal. at 1,590 ft.; W.O.S.R.

J. F. Mitchell No. 3 Muslow, SE NE Sec. 31-21-15. Drlg. sh. 1,100 ft.

J. Ober & Sons No. 1 fee, SE cor. Sec. 36-21-16. Set 8-in. csg. 1,431 ft.; tstd dry 1,684 ft.; set 6-in. csg. 2,257 ft.; tstd. small sprav O.&G.; csg. collapsed T.D. 2,279 ft.; S.I.; hole cleaned: 1,700 ft. O.I.H.; comp. pmpg. at 60 b.p.d. T.D. 2,279 ft.

Oils, Inc., No. 1 Cazaux, SW cor. Sec. 10-16-13. O.W.W.O.; O.T.D. 3,500 ft.; D.D.

Rodessa O. & R. Co. No. 2 Chandler, C NW SE Sec. 34-18-14. R.U.

Harry Smith No. 1 Sproull, SE cor. Sec 32-20-16. 5-in. csg. 1,411 ft.; tstd. S.W. 1,910 ft.; P.B. 1,650 ft. and swbg. S.W.

Southern Star Pet. Corp. No. 1 Muslow, SE NW Sec. 17-20-15. Pmpd. S.W.; arng. dpn. 1,860 ft.; S.D. 2,150 ft.

Tri-State Prod. Corp. No. 1 Stiles, SE cor. NE Sec. 28-21-16. Rng. csg. 1,850 ft.

R. W. Williams No. 1 Ark. Fuel, SE SE Sec. 26-21-16. 5-in. csg. 1,918 ft.

Catahoula Parish

Sibley Sabine Oil Co. No. 1 Peck, S½ Sec. 36-10-8e. Cg. sdy. sh. 3,010 ft.

Claiborne Parish

Maritzky & Bibby No. 1 McClung, Sec 29-21-7. 6-in. csg. 1,819 ft.; T.D 1,827 ft.; used 500 gal.; comp. 5 B.P.D. and considerable S.W. 1,902 ft.

E. T. Oakes et al No. 2 Kilgore, C NW SE Sec. 28-21-5. Hd. to slightly por. L. 5,294-5,303 ft.; 5½-in. csg. 5,287 ft.; used 6,000 gal. acd.; swbg. to test; tstd. S.S.O. 5,324 ft.; split csg. 2,600 ft.; cmtd. csg.; swbd. dry; W.O. 5,324 ft.

Sinclair Prairie Oil Co. No. 9 Langston, SW cor. Sec. 18-21-7. 9⅝-in. csg. 1,200 ft.; drlg. sdy. sh. 1,314 ft.

De Soto Parish

S. S. Alexander No. 1-A Stoll, sec. 6 12-16. Set 7-in. csg. 2,705 ft.; acd. with 3,000 gal. and tstd. est. 2,000,000 ft. gas: 400 lbs.; gas exhausted; 1,000 ft. O.I.H., 2,761 ft.; did not pmp. at 2,761 ft.; S.D. W.O. 2,853 ft.

Paul Miller No. 2 Jal Drig. Co., NE Sec 5-11-11. Set 7-in. csg. 4,038 ft.; perf. 3,901-14 ft.; C.I.; W.O. ga.; R.P. 1,400 lbs.; O.T.D. 4,205 ft.; perf. csg. 3,901-14 ft.; C.I.; W.O. ga.; R.P. 1,400 lbs.

Tippett Oil Corp. No. 1 Williams, SE cor. Sec. 31-13-11. Set 7-in. csg. 1,165 ft.; tstd. S.W. 1,410 ft. P.B. 1,335 ft. and W.O.C. 1,335 ft.

Grant Parish

Long & Porter No. 1 Swope, SE cor NW SE Sec. 18-9-1e. 10-in. csg. 84 ft set 6-in. csg. 1,610 ft.; W.O.C.; T.D. 1,625 ft.

La Salle Parish

Pet. Heat & Power Co. No. 3 Richardson, SE cor. Sec. 3-9-1e. R.U.

Trichell et al No. 1 Gallagher, NW cor Sec. 31-9-2e. Cg. sdy. sh. 1,746 ft.

G. C. Walsenham No. 1 Dean, NW cor. SE Sec. 23-9-1e. Drlg. sh. 667 ft.

Madison Parish

Continental Oil Co. No. 2 Singer Mfg Co., C Sec. 2-15n-11e. Set 7⅝-in. csg. 522 ft.; drlg. sdy. sh. 4,187 ft.

Red River Parish

N. W. Hunter No. 1 LeLong, NW cor. NW SE Sec. 33-12-10. 10-in. csg. 40 ft.; D.S.T. 1,671-88 ft.; tstd. 575 ft. S. W. 9 min.; drlg. sh.&sd. 2,538 ft.

Magnolia Pet. Co. No. 59 Pugh, Sec. 12 12-11. 8¾-in. csg. 2,815 ft.; drlg. sh. &L. 5,816 ft.

J. C. Prine No. 3 Haynes, SW cor. Sec 20-13-10. 5⅜-in. csg. 2,510 ft.; D.D. 2,560 ft.; W.O.S.R.

H. B. Schumacher No. 1 Crichton, SW cor. NW Sec. 18-13-10. R.U.

Sabine Parish

Addison & Peterson No. 1 Dew, SE cor SW SE Sec. 22-8-11. Used 1,500 gal acd. and tstd. S.O. 2,587 ft.; D.&A. 2,587 ft.

Clyde Creighton No. 1 Bowman Hicks, C NE NW Sec. 3-7-12. 10-in. csg. 60 ft.

Earl F. Fox No. 1 Cook Ld. Co., SW cor. SE NW Sec. 1-9-12; O.W.W.O. O.T.D. 3,655 ft.; arng. dpn. 3,655 ft.

A. B. House No. 1 Sabine, NW NW Sec. 23-7-14. 8-in. csg. 2,134 ft.; used 7,000 gal. acd.; tstd. dry; cond. mud 3,642 ft.; arng. set 7-in. 3,500 ft.; T.D. 3,642 ft.

M. J. Kissick No. 1 J. Newton, NE cor. SE Sec. 1-7-11. 6-in. csg. 2,440 ft.

LeGrande & Brown No. 1 Tatum, NE cor. NW NE Sec. 17-8-13. Tstd. dry 2,130 ft.; tstd. S.G.; acd. with 1,000 gal.; tstd. dry 2,340 ft.; did not acd.; tstd S.W.; S.O. 2,340 ft.; 500 ft. O.I.H.; used 3,000 gal. acd.; tstd. S.O. 2,340 ft.; will set short string 4-in. csg. 2,340 ft.

Major Oil Co. No. 1-C Bowman Hicks Lbr. Co., C SW NW Sec. 34-8-12. Drlg. sh. 1,965 ft.

Major Oil Co. No. 6 Bowman Hicks, C SW SE Sec. 11-7-13. Set 10-in. 82 ft set 7-in. csg. 2,196 ft.; drlg. with C.T. 2,380 ft.

Morris Co. No. 1-A Ervine & Bishop, C NE SW Sec. 14-7-13. Set 6-in. csg. 2,177 ft.; used 3,000 gal. acd.; tstd. S.O.; W.O. 2,573 ft.

H L. Nutting No. 1 Williams, SW cor. Sec. 13-7-11. Tstd. dry; will acidize; T.D. 3,130 ft.

C. R. Schuster No. 1 Mary Garcia, NE cor. NW SE Sec. 15-7-13. T.D. 2,603 ft. P.B. 2,585 ft.; tstd. dry S.D.; W.O. 2,585 ft.

Sklar & Neighbors No. 1 Martinez, Sec. 11-7-13. 6-in. csg. 2,172 ft.; used 3,000 gal. acd.; tstd. S.O. 2,312 ft.; top sd. 2,552 ft.; tstd. S.O. and S.W. 2,554 ft.; P.B. 2,210 ft. tstd. dry; W.O. 2,210 ft.

M. S. Slagle et al No. 1 Chadwick, SW cor. SE NW Sec. 32-8-10. Set 6-in. csg. 2,590 ft.

C. H. Smith No. 1 Sabine Lbr. Co., NE cor. NW NW Sec. 9-7-13. Set 10-in. csg. 66 ft.

J. L. Spier No. 2 Hale, SW cor. NW SW Sec. 1-7-13. Set 10-in. csg. 44 ft.; 6-in. 2,106 ft.; drlg. 2,125 ft.

Lee Whitehurst No. 2 First Natl. Bnk., C SE NW Sec. 14-7-13. 7-in. csg. 2,212 ft.; tstd. dry 2,301 ft.; used 3,000 gal acd.; tstd.; used 2,000 gal. acd. and W.O.S.R. 2,605 ft.

Zwolle Synd. No. 1 Mansfield Lbr. Co., Sec. 8-7-19. T.D. 4,323 ft.; 5-in. csg. 3,830 ft.; drlg. plug 4,323 ft.; 2,500 gal. acd.; perf. 3,730-70 ft.; tstd. dry; W.O. 3,770 ft.; O.T.D. 4,323 ft.; sqzd. off perf.; set short string 4-in. csg. 3,883 ft. and perf. 3,861-70 ft. and 3,880-83 ft.; O.T.D. 4,323 ft.; tstd. S.W.; S.O.: P.B. 3,700 ft. and perf. 2,120-40 ft. and 2,234-60 ft.; tstd. small S.G. 2,275 ft. and used 2,500 gal. acid.; swbg. to test; O.T.D. 4,323 ft.

Tensas Parish

H. V. Schumacker No. 4 Mound Plantation, Sec. 29-11-12e. Rmg. to bttm.; T. D. 2,450 ft.; S.D. for D.S.T. 2,450 ft.

Webster Parish

Hunt Oil Co. No. 9 Babb, C N WSE Sec. 14-21-10. Holloway sd. 3,674-95 ft.; set 9⅝-in. csg. 5,657 ft.; W.O.C. 5,877 ft.

Hunt Oil Co. No. 10 Babb, SE cor. Sec. 14-21-10. Drlg. anhy.&sh. 4,111 ft.

Hunt Oil Co. No. 2 Davis Unit, C NW NW Sec. 24-21-10. Hollw. sd. 5,595-5,603 ft.; set 9⅝-in. csg.; did not test Hollwy. sd.; top Bodcaw sd. 8,187 ft.; top Davis sd. 8,457 ft.; rng. 7-in. csg. 8,708 ft.

Hunt Oil Co. No. 10 Davis, C SE SE Sec. 13-21-10. Hollwy. sd. 5,674-78 ft. and 5,719-27 ft.; 9⅝-in. csg. 5,660 ft.; tstd. small S.O. 6,038 ft.; Hollwy. sd.; drlg. sh.&L. 8,009 ft.

Hunt Oil Co. No. 23 Hope, C NW NW Sec. 13-21-10. R.U.

Hunt Oil Co. No. 1 Sandifer, C NE NE Sec. 4-20-10. No Hollwy. sd.; top "D" sd. 8,534 ft.; S.O. 8,534-50 ft.; "D" sd. 8,537-68 ft.; Bodcaw sd. 8,628-68 ft.; set 7-in. csg. 8,715 ft.; perf. csg. 8,540-65 ft. and tstd. S.W.; will sqz. and retest; T.D. 8,600 ft.; O.T.D. 8,720 ft.; P. B. 8,558 ft. and cmt.; did not hold; perf. 8.533-38 ft. and tstd. S.W.; S.O.; T.D. 8,558 ft.; swbg. s.w. 8,533-38 ft.; fsg. 8,558 ft.

Magnolia Pet. Co. No. 4 Branton, NE cor. Sec. 6-22-9. Arng. set 9⅝-in. csg. 5,985 ft.

Magnolia Pet. Co. No. 1-C Pardee, C NW NE Sec. 17-23-11. Rmd. and set 9⅝-in. csg. 5,920 ft.; top lower Marine 7,998 ft.; 8,505-10 ft. strks. hd. sd., O. &G. odor; cd. 8,537-39 ft.; 2-ft. sd. gas odor; drlg. hd. sd. 9,781 ft.

North American Oil Consol. Co. No. 4 Stewart-Coyle, C NW SE Sec. 29-21-10. 9⅝-in. csg. 5,833 ft.; W.O.C. 5,935 ft.

Ohio Oil Co. No. 5 Bodcaw, Acct. 5, Sec. 13-21-10. No Holloway sd.; 9⅝-in. csg. 5,640 ft.; drlg. 5,927 ft.

Ohio Oil Co. No. 51 Bodcaw Acct. 2, NE cor. Sec. 15-21-10. Drlg. sh. 7,910 ft.

Ohio Oil Co. No. 1 W. Cox, Acct. 2, SE cor. SW Sec. 15-21-10. No Hollwy. sd.; 9⅝-in. csg. 5,714 ft.; top Bodcaw sd. 8,472-8,508 ft.; set 7-in. csg. 8,480 ft.; tstg.; T.D. 8,520 ft.; comp. 394 B.P.D. dist. and 7,000,000 ft. gas; ⅝-in. ck.; C.P. 2,500 lbs.; T.P. 2,400 lbs.

Ohio Oil Co. No. 8 B. Sydney Hrs., SW cor. Sec. 16-20-10. No Hollwy. sd.; 9⅝-in. csg. 5,670 ft.; drlg. hd. sd. 7,415 ft.

Oliphant Oil Corp. No. 1 Gray & Stephens, C SE SW Sec. 35-21-10. Top Tr. Pk. 5,882 ft.; Hollwy. sd. 5,975-88 ft.; 9⅝-in. csg. 5,595 ft.; drlg. sdy. sh. 6,799 ft

Oliphant Oil Corp. No. 1-A Hodges, C NW NE Sec. 3-20-10. R.U.

Oliphant Oil Corp. No. 2-B Stewart, C NW NW Sec. 4-20-10. No Hollwy. sd.; 9⅝-in. csg. 5,615 ft.; top "D" sd. 8,594 ft., S.W.; T. Bodcaw 8,684 ft.; 7-in. csg. 8,672 ft.; tstg. 8,692 ft.

Stanolind O. & G. Co. and W. Delaney No. 1 Pardee-Coffee Unit, C NE Sec. 36-21-10. Drlg. sh.&L. 5,922 ft.

Stanolind O. & G. Co. and Hunt Oil Co. No. 1 Pardee-Coffee Unit, C NE NE Sec. 36-21-10. Top Tr. Pk. 5,897 ft.; no Hollwy.; 9⅝-in. csg. 5,944 ft.; drlg. sh.&sd. 7,903 ft.

Stanolind O. & G. Co. No. 1 Webster Inv. Co., C NE NE Sec. 35-21-10. 13⅜-in. csg. 737 ft.; no Hollwy. sd.; top Tr. Pk. 5,680 ft.; 9⅝-in. csg. 5,997 ft.; drlg. sh.&sd. 7,860 ft.

Union Prod. Co. No. 1 Walker Unit, 50 ft. S, C SE Sec. 30-18-8. 13⅜-in. csg. 1,413 ft.; drlg. sh.&L. 3,484 ft.

Woodley Pet. Co. No. 1 J. O. Couch, C NW SW Sec. 36-21-10. Drlg. sh. 6,697 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Francioi, Sec. 67-12s-3e. Drk.

Bancroft—Beauregard Parish

Geo. E. Lilly et al No. 1 W. K. Rice, Sec. 15-6s-13w. Top gas sd. 7,185 ft.; cg. sd. 7,314 ft.

Republic Prod. Co. No. 2 Columbia Ld. & Tmbr. Co., Sec. 16-6s-13w. T.D. 3,400 ft.; P.B.; sdtrkd.; T.D. 7,360 ft.; 7-in. csg. 7,352 ft. (cor.); perf. csg. 7,294-99 ft.; trying to sdtrk.

Republic Prod. Co. No. 3 Columbia Ld. & Tbr. Co., Sec. 16-16s-13w. Top sd. 7,238 ft.; T.D. 7,292 ft.; D.S.T. 7,285-92 ft.; rec. 750 ft. oil; run csg.

Republic Prod. Co. No. 3 Lutcher Moore Lbr. Co., Sec. 16-6s-13w. S.D. 805 ft.

Bateman Lake—St. Mary Parish

Texas Co. No. 2 State-Bateman Lake, Sec. 21-16s-12e. Loc.

Texas Co. No. 1 Wax Bayou, Sec. 21-16s-12e. T.D. 11,185 ft.; 7⅝-in. csg. 11,126 ft.; P.B. 10,925 ft.; perf. csg. 10,907-20 ft.; tstd. oil and S.W.; set retainer at 10,895 ft.; perf. csg. 10,907-12 ft.; rec. 6,615 ft. of oil and S.W.; P.B. 10,810 ft.; perf. csg. 10,778-803 ft.; tstd. dry gas.

Baton Rouge—East Baton Rouge Parish

Geo. Helis et al No. 1 Aztec Oil & Roy. Co., Sec. 41-8s-1w. T.D. 7,375 ft.; abd.

Wm. Helis No. 3 Duplantier, Sec. 65-7s-1w. T.D. 6,820 ft.; P.B. 6,788 ft.; perf. csg. 6,775-78 ft.; flwd. oil and S.W.; cut. window in csg. 6,775-78 ft.; ran liner; prep. to perf.

Wm. Helis No. 2 Harry Nolson, Sec. 36-7s-1w. Drlg. 600 ft.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 3 Schwing Lbr. Co., Sec. 66-9s-11e. Bldg. drk.

Humble O. & R. Co. No. 10 Wilberts, Sec. 66-9s-11e. T.D. 5,890 ft., salt; abd.

Bayou Bouillon—St. Mary Parish

Transcontinental Oil Co. No. 5 State, Sec. 13-9s-9e. Drlg. gravel 210 ft.

Bayou Choctaw—West Baton Rouge

La. Crusader No. 4 Schwing, Sec. 29-8s-11e. T.D. 7,470 ft.; fsg.

La. Crusader No. 5 Schwing, Sec. 29-8s-11e. 9⅝-in. csg. 2,250 ft. Drlg. sh. 4,500 ft.

Bayou Des Allemands—St. Charles Parish

Amerada Pet. Corp. No. 3 St. Charles Ld. Co., Sec. 13-15s-20e. Dredge canal.

Caillou Island—Terrebonne Parish

Texas Co. No. 4 State-Terrebonne Bay, Sec. 19-23s-20e. Loc.

Texas Co. No. 5 State, Sec. 19-23s-20e. T.D. 6,240 ft.; sdtrkd.; T.D. 6,521 ft.; P.B.; sdtrkd.; T.D. 6,672 ft.; P.B.; sdtrkd.; T.D. 6,709 ft.; 7-in. csg. 6,677 ft.; perf. csg. 6,570-90 ft.; tstd. 1,600 lbs. press.; rec. 6 gal. dist.; perf. csg. 6,470-97 ft.; I.P. 497 B.P.D., ¼-in. choke.

Texas Co. No. 29 State, Sec. 17-23s-20e. Rig.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 26 Sch. Ld., Sec. 16-14s-13w. T.D. 2,465 ft.; 13¾ in. csg. 2,465 ft.; T.D. 5,466 ft.; drill stem stuck.

Chacahoula—La Fourche Parish

Sun Oil Co. No. 3 Dibert, Stark & Brown Cypress Co., Sec. 70-15s-15e. T.D. 7,275 ft.; drill stem stuck.

Sun Oil Co. No. 4 Dibert Stark and Brown Cypress Co., Sec. 70-15s-15e. Bldg. foundation.

Charenton—St. Mary Parish

Edwards & Aber No. 2 Blanchard, Sec. 21-13s-9e. T.D. 1,148 ft.; 5½-in. csg. 1,141 ft.; tstd. S.W.; P.B. 1,132 ft.; perf. csg. 1,125-32 ft.; W.O.S.R.

Edwards & Aber No. 1 Lebland, Sec. 21-13s-9e. Top sd. 1,119 ft.; T.D. 1,123 ft.; W.O.S.R.

Kinsley Oil, Inc., No. 1-B Hertel, Sec. 30-13s-9e. Loc.

Kinsley Oil Co., Inc., No. 3 LeBlanc, Sec. 21-13s-9e. Top sd. 1,797 ft.; T.D. 1,804 ft.; P.B. 1,780 ft.; 5-in. csg. 1,776 ft.; I.P. 125 B.P.D.; ¼-in. ck.

Pan American Prod. Co. No. 5 Robichaux, Sec. 25-13s-9e. T.D. 2,454 ft.; 7-in. csg. 2,449 ft.

Pan American Prod. Co. No. 10 Veeder, Sec. 30-13s-10e. T.D. 1,668 ft.; 7-in. csg. 1,645 ft.; tstd. S.W.; drld. to 3,050 ft.; P.B. 2,250 ft.; T.D. 2,459 ft.; 5-in. csg. 2,454 ft.; I.P. 95 bbls. per day on gas lift.

Peterson Pet. Corp. No. 1 Green Est., Sec. 27-13s-9e. T.D. 50 ft.; rebldg. drk.

J. P. Scranton et al No. 1 State, Twp. 13s-9e. Drlg 40 ft.

St. Mary Oil Co. No. 1 Robichaux, Sec. 21-13s-9e. T.D. 1,830 ft.; 7-in. csg. 1,830 ft.; drlg. plug.

Convent—St. James Parish

Continental Oil Co. No. 2 Realty Operators, Inc., Sec. 16. Bldg. drk.

Creole—Cameron Parish

Superior Oil Co.-Pure Oil Co. No. 3 State-Gulf of Mexico, T.D. 5,249 ft.; P. B.; sdtrkd.; T.D. 2,983 ft.; sdtrkd. 1,298 ft.; top sd. 5,247 ft.; T. D. 5,267 ft.; 7-in. csg. 5,244 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 2-B Community, Sec. 55-10s-2e. T.D. 7,692 ft.; rmg.

Humble O. & R. Co. No. 19 Community, Sec. 31-10s-2e. T.D. 7,280 ft., salt; P.B. 4,596 ft.; sdtrkd.; T.D. 7,717 ft.; 7-in. csg. 7,716 ft.

Humble O. & R. Co. No. 4 Landry, Sec. 34-10s-2e. R.U.

Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 22 State, Sec. 5-22s-16e. 13⅜-in. csg. 2,030 ft.; T.D. 6,928 ft.; P.B. 6,186 ft.

Edgerly Field—Calcasieu Parish

R. H. Kean et al No. 1 M. J. Muller et al, Sec. 29-9s-11w. T.D. 2,862 ft.; drill stem stuck.

Union Sulphur Co. No. 1 Ld. Sulphur Mining Co., Sec. 33-9s-11w. T.D. 6,981 ft.; abd.

Fausse Point—Iberia Parish

Texas Co. No. 5 State Lake-Fausse Point Sec. 35-11s-8e. Drlg. broken sd.&sh. 8,501 ft.

Gibson—Terrebonne Parish

Shell Pet. Corp. No. 6-B Realty Operators, Sec. 17-17s-15e. Drlg. sh.&L. 9,114 ft.; D.S.T. 9,069-82 ft.; rec. 19 stands of oil.

Garden Island—Plaquemines Parish

Texas Co. No. 30 State, Sec. 38-23s-33e T.D. 6,943 ft.; fsg. for D.S.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 1 Erwin, Sec. 14-9s-8w T.D. 7,053 ft.; 7-in. csg. 7,051 ft.; perf. csg. 7,026-32 ft.; testing.

Grand Bay—Plaquemines Parish

Gulf Ref. Co. No. 1 State-QQ, Sec 20s-19e. 13⅜-in. csg. 1,498 ft.; shaly sd. S.O. 6,083-86 ft.; rec. 1,830 ft. mud & S.W.; D.S.T. 6,582-6,612 ft.; cg. ahead.

Hackberry—Cameron Parish

L. W. Capps et al No. 1 Duhon, Sec. 27-12s-10w. Drlg. sh. 3,424 ft.

Stanolind O. & G. Co. No. 2 Kaugh, Sec. 28-12s-10w. T.D. 3,050 ft.; P.B.; sdtrk.; T.D. 3,040 ft.; W.O.S.R.

Superior Oil Co. No. 4 Benson, Sec. 30-12s-10w. T.D. 6,668 ft.; 7-in. csg. 6,597 ft. I.P. 250 bbls. 22 hrs.; 9/64 in. choke.

Superior Oil Co. No. 5 Benson Vincent, Sec. 30-12s-10w. R.U.

Texas Co. No. 16-B State-Hackberry, Twp. 12s-9w. Drlg. sh.&L. 4,409 ft.

Texas Co. No. 24-B State, Sec. 12s-9w T.D. 8,052 ft.; sdtrkd.; T.D. 8,163 ft. 7-in. csg. 8,050 ft.; perf. csg. 7,903-16 ft.; tstd. S.W.; P.B. 7,780 ft.; perf csg. 7,763-74 ft.; W.O.S.R.

Union Sulphur Co. No. 7 Caldwell et al, Sec. 37-12s-10w. Drlg. sh. 5,546 ft.

Union Sulphur Co. No. 11 Doiron, Sec. 37-12s-10w. Drlg. sdy. lime 3,013 ft.

Horseshoe Bayou—St. Mary Parish

Texas Co. No. 2 State, Sec. 37-17s-9e T.D. 11,644 ft.; 9⅝-in. csg. 11,631 ft.; drlg. sh. 11,720 ft.; cored sd.&sh. oil odor 11,685-96 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Adeline Sugar Co., Sec. 39-13s-9e. R.U.

Herton Oil Co. No. 9 Carter, Sec. 38-13s-9e. Drlg. sd.&sh. 8,464 ft.

Jefferson Island—Iberia Parish

Texas Co. No. 2 Jefferson Island, Sec. 58-12-5e, 18⅝-in. csg. 40 ft.; drlg. sh.&L. 1,751 ft.

Jennings—Acadia Parish

W. T. Burton No. 6 Roboria, sec. 41-9s-2w. 7-in. csg. 6,721 ft.; fsg. tbg.; T.D. 6,997 ft.; sdtrkd. at 6,118 ft.; drld. to 6,178 ft.; sdtrkd. at 6,023 ft.; T.D. 6,732 ft.; trying to drill by fish.

A. W. Forrester No. 1 Jules Clement, Sec. 46-9s-2w. Drlg. sh. 2,890 ft.

Glassell & Glassell No. 4 McFarlain, Sec 41-9s-2w. Drlg. sd.&sh. 5,407 ft.

Glassell & Glassell No. 7 Trushel, Sec. 42-9s-2w. Drlg. sd.&sh. 4,062 ft.

Guaranty Oil Co. No. 2 Houssere-Latrielle, Sec. 47-9s-2w. T.D. 1,840 ft.; W.O.S.R.

Gulf Oil Corp. No. 40 Arnaudet, sec. 48-9s-2w. T.D. 6,871 ft.; 7-in. csg. 6,852 ft.

Gulf Ref. Co. No. 1 Lamb, Sec. 45-9s-2w. Drlg. sh. 5,539 ft.

Iles Pet. Co. No. 3 Jennings, Sec. 41-9s-2w. T.D. 2,174 ft.; 6⅝-in. csg. 2,124 ft.

Jolly Pet. Co. No. 2 Crusel, Sec. 41-9s-2w. 16-in. csg. 84 ft.; perf. csg. 1,824-40 ft.; W.O.S.R.; drlg. sdy. sh.&L. 2,254 ft.

Jolly Pet. Co. No. 3 McFarlain, Sec. 41-9s-2w. Drlg. sdy. sh.&L. 2,254 ft.

L. & L. Oil Co. No. 4 Houssiere Latreille, Sec. 47-9s-2w. T.D. 1,825 ft.; 7-in. csg. 1,817 ft.; T.D. 1,881 ft.; swbg.

Ladak Oil Corp. No. 7 Jennings, Sec 46-9s-2w. T.D. 2,435 ft.; P.B. and sidetracked; T.D. 1,737 ft.; I.P. 50 B.O. pumping.

Ladak Oil Co. No. 8 Jenning Clement, Sec. 46-9s-2w. Loc.

O'Mera et al No. 2 McFarlain, Sec. 41-9s-2w. T.D. 1,625 ft.; 10¾-in. csg. 1,628 ft.; drlg. sd. 5,886 ft.

Shell Pet. Corp. No. 5 Community, Sec. 40-9s-2w. Drlg. sdy. sh. 6,327 ft.

Stanolind O. & G. Co. No. 113 Crowley & Mineral Co., Sec. 48-9s-2w. Drlg. sh. &sd. 6,104 ft.

Superior Oil Co. No. 9 Jennings-Haywood, Sec. 41-9s-2w. Drlg. sh. 6,273 ft.

Superior Oil Co. No. 15 Leckelt, Sec 42-9s-2w. T.D. 8,744 ft.; 5½-in. liner 8,739 ft.

Three Sands Oil Co. No. 2 Clement, Sec 46-9s-2w. 6-in. csg. 1,700 ft.; S.D. 2,600 ft.

Lafitte—Jefferson Parish

Carter-Perrin & Brian No. 1 Lucien Adams, Sec. 9-17s-24e. S.D. 10,212 ft.

Texas Co. No. 4 Madison Realty Co., 17s-24e. Drlg. sh. 8,270 ft.

Texas Co. No. 1 Sch. Bd., Sec. 16-17s-24e. 13⅜-in. csg. 2,030 ft.; drlg. sh.& L. 9,636 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 22 State, Sec. 8-23s-18e T.D. 6,027 ft.; reaming.

Leesville—La Fourche Parish

Texas Co. No. 7 Leesville, sec. 27-21-22e. T.D. 8,667 ft.; D.S. stk.; sdtrkd.; T.D. 8,436 ft.; sdtrkd.; drlg. sh. 8,685 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Laterre, Inc. Sec. 31-19s-19e. 13⅜-in. csg. 3,174 ft.; T.D. 8,463 ft.; reaming.

Lake Long—La Fourche Parish

Fohs Oil Co. No. 6 State-Lake Long Twp. 17s-19e. 10¾-in. csg. 3,066 ft.; cd. oil sd. 9,365-69 ft.; T.D. 9,482 ft.; 7-in. csg. 9,481 ft.; perf. csg. 9,340-60 ft.; flwd. 84 B.O.P.D.; ¼-in. ck.; T.P. 3,000 lbs.; C.P. 2,800 lbs.; killed to rework.

Fohs Oil Co. No. 7 State-Lake Long Twp. 17s-19e. M.I.M.; drlg. barge.

New Iberia—Iberia Parish

H. Fotiades No. 7 Gulf Ld., Sec. 25-12s-7e. Drk.

Wm. Helis No. 5 Schwing, Sec. 56-12s-7e. T.D. 4,954 ft.; W.O.C.

Texas Co. No. 2 Bryant, Sec. 25-12s-7e R.U.

Texas Co. No. 5 Bryant, Sec. 25-12s-7e T.D. 6,627 ft. salt; top salt 6,612 ft.; 7-in. csg. 6,608 ft.

Texas Co. No. 1 Gonsoulin, Sec. 13-12s-7e. Drlg. L.&sh. 8,903 ft.

Texas Co. No. 1 Renaudet et al, Sec. 71-12s-7e. Drlg. clay 44 ft.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 4 Federal Ld. Bnk., Sec. 34-8s-1e. T.D. 7,196 ft.; 7-in. csg. 7,193 ft.; I.P. 389 B.P.D.; ⅞-in. ck.

Humble O. & R. Co. No. 5 Federal Ld. Bnk., Sec. 33-8s-1e. Drlg. sh. 2,032 ft.

North Topetate—Acadia Parish

Atlantic Ref. Co. No. 2 Klumpp, Sec. 12-7s-2w. Cored gas sd. 7,943-63 ft.; drlg. sdy. sh. 8,350 ft.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 1 Rene Nezal, Drk.

T. D. Spill No. 1 Gaudet, sec. 4-8s-5e S.D. 4,700 ft.

Potash—Plaquemines Parish

Humble O. & R. Co. No. 37 Orleans Lv Bd., Sec. 23-18s-15e. T.D. 3,138 ft.; rng 13⅜-in. csg. 3,061 ft.; drlg. sd. 4,310 ft.

Western Gulf Prod. Co. No. 1 Pascale, Sec. 6-18s-27e. Loc.

Western Gulf Prod. Co. No. 1 Sam Treadway, Sec. 6-18s-27e. T.D. 2,952 ft.; S.D. for heavy rig.

Western Gulf Prod. Co. No. 1-A Treadway, Sec. 6-18s-27e. Loc.; (cor.).

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp. No. 2-A Orleans Levee Bd., Sec. 7-19s-17e. Loc.

Gulf Ref. Co. No. 5 State, Sec. 17-19s-17e Loc.

Gulf Ref. Co. No. 6 State, Sec. 17-19s-17e T.D. 5,900 ft.; 9⅝-in. csg. 5,880 ft.; drlg. sdy. sh. 6,161 ft.

Gulf Oil Ref. Co. No. 7 State, Sec. 18-19s-17e. Drlg. sdy. sh. 2,062 ft.

Raceland—La Fourche Parish

Amerada Pet. Corp. No. 1 Godchaux Sugars, Inc., Sec. 34-15s-19e. 18⅝-in. csg. 262 ft.; T.D. 11,312 ft.; 7-in. csg. 11,312 ft.; T.A.

Amerada Pet. Corp. No. 3 South Coast Corp., Sec. 34-15s-19e. 11¾-in. csg. 2,698 ft.; T.D. 10,266 ft.; 7-in. csg. 10,262 ft.; perf. csg. 10,132-10,210 ft.; I.P. 770 B.P.D.; ½-in. ck.

Tide Water Oil Co. No. 1-A South Corp Sec. 34-15s-19e. T.D. 10,315 ft.; P.B. 7,350 ft. to test 7,160-7,228 ft.; perf. csg. 7,174-90 ft.; I.P. 705 B.P.D.; ¼-in. ck.

Sorrento—Ascension Parish

Sorrento Pet. Corp. No. 2 White, Sec 22-10s-4e. 10¾-in. csg. 1,940 ft.; drlg. sd.&L. 6,210 ft.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. No. 2 T. R. S. Farms, Sec. 23-10s-4w. T.D. 10,854 ft.; drlg.; sdtrk. 9,075 ft.; drilled to 9,266 ft.; stuck D.S.; P.B. 8,860 ft.; sdtrkd.; drlg. sh. &L. 9,628 ft.

Gueydan—Acadia Parish

A. M. Barbe No. 1 G. L. Humble, Sec. 27-11s-1w. Drlg. sh. 3,339 ft.

Buckley et al No. 1 Mulvey Irrig. Co., Sec. 34-11s-1w. Top salt 4,792 ft.; T.D. 4,801 ft.; S.D.; abd.

Burton-Sutton Oil Co. No. 1 Valerean-Simon, Sec. 37-11s-1w. Drlg. sh. sdy. sh. 7,548 ft.

Starks—Calcasieu Parish

J. R. Turnbull et al No. 5 Industrial Lbr Co., Sec. 30-9s-12w. Drlg. sh. 1,686 ft.

Sweet Lake—Cameron Parish

Pure Oil Co. No. 1 Stanolind O. & G. Co. fee lse., Sec. 12-13s-8w. Drk.

Timbalier Bay—La Fourche Parish

Gulf Oil Corp. No. 4 State, sec. 36-23-21e. T.D. 7,373 ft.; T.D. sdtrkd. hole 6,231 ft.; fsg.; P.B. and sdtrkd. 3,501 ft.; T.D. 6,545 ft.; drld. by jnk. to 6,668 ft.; P.B.; 7-in. csg. 6,651 ft.; top salt 7,224 ft.; T.D. 7,268 ft., salt; P.B. 5,400 ft.; perf. csg. 5,330-40 ft.; tstd. 3,504 lbs. press.; reset screen; would not flow; reset screen; bailed dry; P.B. 5,345 ft.; perf. csg. 5,330-40 ft.; swbd. dry; S.D.

Valentine—La Fourche Parish

Wm. Helis et al No. 4 Valentine Sugars Inc., Sec. 2-17s-20e. T.D. 7,567 ft.; P.B. 6,765 ft.; drld. out to 6,790 ft.; tstd. oil and S.W. 6,726-95 ft.; P.B. 4,750 ft.

Pan American Prod. Co. No. 2-A Community, Sec. 58-17s-20e. Drlg. sh. 8,356 ft.

Venice—Plaquemines Parish

Tide Water Asso. Oil Co. No. 9 Manhattan Land & Fruit Co., Sec. 26-21s-30e. Drlg. sh. 200 ft.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 1 Phillip Fontenot, Sec. 44-3s-2e. Drlg. sh. 8,750 ft.

Continental Oil Co. No. 2 Ludeau-Haas, Sec. 44-3s-2e. Drlg. sh. 8,516 ft.

Continental Oil Co. No. 3 Piere McDaniel, Sec. 44-3s-2e. R.U.R.

Continental Oil Co. No. 2 Martha Haas. Sec. 44-3s-2e. Drk.

Continental Oil Co. No. 2 N. H. Hirsch, Sec. 44-3s-2e. Drk.

Continental Oil Co. No. 2 Petre, Sec. 44-3s-2e. Drk.

Continental Oil Co. No. 1 Adam Tate, Sec. 47-3s-2e. T.D. 9,100 ft.; 6-in. csg. 9,100 ft.; perf. csg. 9,075-9,100 ft.; sqzd. with cmt.; perf. csg. 8,887-8,905 ft.; I.P. 83 bbls. 11 hrs., 3/16-in. choke.

Continental Oil Co. No. 2 Tate-McDaniel, Sec. 44-3s-2e. T.D. 9,027 ft. oil sd.

Texas Co. No. 2 fee, Sec. 27-3s-2e. Loc.

Vinton—Calcasieu Parish

J. M. Donald et al No. 1 Gordon, Benchenstein-Flynn, Sec. 34-10s-12w. T.D. 1,000 ft.; W.O.C.

West Gueydan—Vermilion Parish

Magnolia Pet. Co. No. 1 Adam Comier, Sec. 5-12s-2w. R.U.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 1 Racea, Sec. 12-9s-6w. T.D. 8,679 ft.; W.O.

Union Sulphur Co. No. 1 A. H. Thomas. Sec. 12-9s-6w. R.U.

S. LOUISIANA WILDCATS

Acadia Parish

D. Freeman No. 2 J. E. Settig, Sec. 17-7s-1w. T.D. 1,342 ft.; T.A.

Tri Parish Drillers, Inc., No. 1 Paul Stag, Sec. 4-7s-1w. Drk.

Assumption Parish

Humble O. & R. Co. No. 1 Milliken & Farewell Co., Inc., Sec. 79-14s-14e.; drlg. 241 ft.

Avoyelles Parish

Sid Richardson No. 1 Haas Inv. Co., Sec. 7-28s-3e. Drk.

Calcasieu Parish

Humble O. & R. Co. No. 1 Desire-Miller, Sec. 32-11s-6w. Drlg. sh. 7,824 ft.

Humble O. & R. Co. No. 1 S. A. Knapp, Sec. 20-10s-8w. Drk.

David B. MacDaniel No. 2 Sch. Ld., Sec. 16-9s-7w. 15½-in. csg. 46 ft.; 10¾-in. csg. 1,299 ft.; prep. to resume operations.

Cameron Parish

Federal Royalty Co. No. 2 State-Calcasieu Lake, Twp. 13s-9w. Driving piling.

Pure Oil Co. No. 3 Calcasieu Natl. Bnk., Sec. 19-12s-4w. T.D. 8,051 ft.; run electrical survey.

Superior Oil Co. No. 1 John Pradia, Sec. 4-15s-8w. Loc. (core test); drlg. wtr. well.

Iberville Parish

California Co. No. 1 Schwing Lbr. Co., Sec. 96-10s-10e. Canal completed.

Humble O. & R. Co. No. 1-B A. Wilberts Sons Lbr. Co., Sec. 78-8s-8e. Loc.

La Fourche Parish

Texas Co. No. 1 La Terre, Sec. 1-20s-21e. T.D. 8,898 ft.; 9⅝-in. csg. 8,898 ft.; T.D. 11,135 ft.; 2,500 ft. 6⅝-in. csg. 11,135 ft.; perf. csg. 9,975-10,005 ft.; tstd. 21 stnds. dist.; P.B. 8,600 ft.; drlg. out cmt. to 9,316 ft.; perf. csg. 9,265-90 ft.; tstd. S.W.; made sqz. job: reperf. csg. 9,230-57 ft.; make D.S.T.; perf csg. 8,850-70 ft.; rec. 71 stands of S.W. and 3 stands of mud and oil; squeezed perf.; W.O.C.

Texas Co. No. 1 State-Catfish Lake, Sec 77-19s-21e. 18⅝-in. csg. 90 ft.; drlg. sh. 3,802 ft.

Orleans Parish

W. T. Burton No. 2-B Faubourg de Montluzin. Sec. 1-10s-13e. Drlg. sdy. sh. 9,410 ft.

W. T. Burton No. 1-B R. E. E. de Montluzin, Sec. 1-10s-13e. Drk.

W. T. Burton No. 1 State-Lake Pontchartrain, Twp. 10s-12e. T.D. 8,367 ft.; P.B. 7,775 ft.; sdtrkd. at 7,959 ft.; T.D. 8,165 ft.; 9⅝-in. csg. 8,165 ft.; T.D. 8,241 ft.; tstd. S.W.; D.S.T. 8,135-8,241 ft.; drlg. wtr. sd. 9,462 ft.

Plaquemines Parish

Texas Co. No. 1 L.L.&E. Bastian Bay, Sec. 43-20s-28e. Bldg. foundation.

St. Bernard Parish

Gulf Ref. Co. No. 4 State-R.R. (Lake Borgne), Twp. 12s-15e. Drlg. sh.&L. 7,571 ft.

Wm. Helis et al No. 1 Mereaux-Munez, Sec. 34-12s-12e. Drlg. sd.&sh. 1,865 ft.

Vendome Pet. Corp. No. 1 Kenilworth Plantation, Sec. 59-13s-14e. R.U.

St. Charles Parish

Texas Co. No. 1 L.L.&E. Paradis, Sec. 39-14s-20e. R.U.

St. James Parish

Shell Pet. Corp. No. 1 Shexnayder, Sec 38-12s-15e. Drlg. sh. 3,575 ft.

St. Martin Parish

Shell Pet. Corp. No. 1 Hazel Burdin. Sec. 15-14s-12e. T.D. 9,833 ft.; sd. S.O.; D.S.T. 9,823-33 ft.; recovered S.W.; P.B. 8,049 ft.; perf. csg. 8,017-20 ft.; rec. 952 ft. oil 7-minute D.S.T.; run liner.

Texas Co. No. 6 State Lake Mongoulois. Sec. 10-10s-9e. T.D. 9,858 ft.; 7⅝-in. csg. 9,839 ft.; drlg. sd.&L., 10,383 ft.

Texas Co. No. 11 St. Martin Ld. Co., Sec. 21-8s-7e. Top salt 8,904 ft.; T.D. 9,404 ft.; 7-in. csg. 8,912 ft.; P.B. 7,175 ft.; drld. out to bttm.; P.B. 8,080 ft.; perf. csg. 8,060-70 ft.; tstd. mud, gas and S.W.; sqzd. off perf.; perf. csg. 8,060-65 ft.; tested 38 stands oil and gas showing fresh wtr.

St. Mary Parish

St. Mary Oil Co. No. 2 L. Herbert, Sec. 31-13s-9e. Drlg. sh. 5,987 ft.

St. Tammany Parish

A. P. Portas No. 1 W. C. Forbes, sec. 33-7s-15e. Drk.

Terrebonne Parish

Texas Co. No. 1 Continental Ld. & Fur Co., Sec. 29-18s-14e. 18⅝-in. csg. 101 ft.; T.D. 10,039 ft.; P.B. 9,852 ft.; sdtrk. 9,984 ft.; T.D. 10,075 ft.; 9⅝-in. csg. 10,061 ft.

Texas Co. No. 2 State-Coon Point, Twp 23s-14e. 13⅜-in. csg. 1,900 ft.; T.D. 2,851 ft.; S.D. for repairs.

ARKANSAS

Calhoun County

Samuel S. Alexander No. 1 Smythe, C NE NE Sec. 7-11-14. Sd., hd. sh.&sd. 3,406 ft.; W.O.

A. E. Murdock No. 1 Southern Kraft Corp., SE cor. NW NW sec. 17-14-13. Top Nac. 2,372 ft.; top Tokio 2,920 ft. S.D. 3,291 ft.

Columbia County

Atlantic Ref. Co. No. 1 Barnette, C SW SE Sec. 14-17-20. R.U.

Normandie Oil Corp. No. 1 L. Garrett, C NE NE Sec. 23-17-20. R.U.

Pet. Finance Co. No. 1 Barnett, C NW SE Sec. 14-17-20. 16-in. 135 ft.; drlg. red sdy. sh. 5,325 ft.

Pet. Finance Co. No. 1 Garrett, C SW SW Sec. 13-17-20. M.I. rig.

Southwood Oil Co., Inc., No. 1 L. Garrett, C SW SW Sec. 13-17-20. Drlg. red sdy. sh. 5,270 ft.

Standard Oil Co. of La. No. 1 E. D. Harris, NW cor. NW SE Sec. 15-7-19. T. lime 7,366 ft.; set 6-in. csg. 7,436 ft.; T.D. 7,442 ft.; W.O.C.

Standard Oil Co. of La. No. 4 McKean, SW cor. NW SW Sec. 8-16-22. T. Buckner 6,947 ft.; T. P. 7,207 ft.; cd. soft sat. L. 7,217-27 ft. cg. 7,248 ft.

Standard Oil Co. of La. No. 1 Minnie Harris, NE cor. NE SW Sec. 15-17-19. Drk.

Tide Water Seaboard No. 1 Beene, C SE NW Sec. 15-18-19. Top Cotton Valley 5,887 ft.; cd. 7,000-08 ft.; rec. 4 ft. sd. &sh.; stain oil; cd. 7,020-32 ft.; rec. 1 ft. wtr. sd. and 6 jts. gr. sd.&sh.; no show; cd. S.O. 7,305-10 ft.; cd. 7,997-8,005 ft.; red sd.&sh.; arng. drl. ahead.

Hot Springs County

John H. James No. 1 Sturgess Lbr. Co., SW cor. SW SE Sec. 24-6-18. 10-in. csg. 58 ft.; W.O.C. 63 ft.

Lafayette County

Shell Pet. Corp. & Ohio Oil Co. No. 1 Warren, C SE SE Sec. 13-16-24. Drlg. 50 ft.

Wadley-Erwin et al No. 1 G. W. Taylor, C NE SW Sec. 15-19-26. R.U.

Little River County

Barbee et al No. 1 Ada Mills, SE cor. SW NW Sec. 18-12-29. R.U.

C. & M. Drlg. Co. No. 1 Strawn, SW cor. SE Sec. 20-10-32. Drlg. 417 ft.

Harford Oil Corp. No. 1 Pinning, C NE NE SW Sec. 6-13-30. Fsg. D.S. 1,825 ft.

Lonoke County

Cabot Drlg. Club, Inc., No. 1 Benson Townsite, Sec. 18-4n-9w. Set 4½-in. csg. on pkr. 1,540 ft.; S.D. 2,406 ft.

J. W. Eddington No. 1 Anderson, S.D. 900 ft.

Lonoke-Prairie Dev. Co. No. 1 T. Young, C NW NW Sec. 8-3n-7w. D.S. stuck 236 ft.

Miller County—Rodessa

Gulf Ref. Co. No. 5 Johnson, SW cor. Sec. 29-15-15. R.U.

Lyons & Merritt Oil Co. No. 1 E. B. Mitchell, SE cor. NE SW Sec. 2-20-28. R.U.

Mrs. S. O. Thompson No. 1 Gen. Am. Life Ins. Co., SE cor. SE SW Sec. 20-14-26. Cd. 3,657 ft.; slightly por. sdy. L.; D.S. stk.; T.D. 3,825 ft.; D.S.T. 3,

677-95 ft.; tstd. 15 thribbles S.W.; 8 min.; S.D.; W.O.; 3,851 ft.

Mississippi County

Benedum & Trees Oil Co. No. 1 Mack 330 ft. SW cor. NW SW Sec. 2-15n-12e. Top Nac. 2,160 ft.; set 7-in. csg 2,897 ft.; drlg. hd. gr. L. 3,316 ft.

Nevada County

J. E. Spears, Tr., No. 1 P. T. Phillips, SW cor. SE SW Sec. 18-14-21. 10-in. 40 ft.; D.&A. 1,476 ft.

Texas Canadian Oil Corp. No. 2 Stocks, NW SW SE Sec. 9-15-22. Cor. T.D. 1,395 ft.; 7-in. 1,340 ft.; perf. csg. 1,395 ft.; recmtd. csg. and ripped csg. 1,209-15 ft.; W.O.S.R.; 250 ft. O.I.H.; T. Nac. 1,202 ft.

O. F. Whittaker No. 1 Edwards, Sec. 3-15-20. Cd. brkn. sd.; S.O. 2,030-2,155 ft. set 6¼-in. csg. 2,030 ft.; W.O.S.R.; 60 ft. F.I.H. 2,155 ft.

Ouachita County

Gulf Ref. Co. No. 5 Johnson, SW cor. SE SW Sec. 29-15-15. 6⅝-in. csg. 1,973 ft.; drld. out to 2,030 ft.; pmpg. est. 600 B.P.D. S.W.; slight rainbow oil; P.B. 2,012 ft.; cmtd. bck. 2,005 ft.; comp. pmpg. 30 B.P.D., 8% S.W.; T.D. 2,000 ft.; O.T.D. 2,030 ft.

Pike County

Bruce Wallace No. 1 Tilyeu, NE cor. SE Sec 26-8s-24w. S.D.; D.&A. 392 ft.

Pulaski County

A. L. Kitselman No. 2 A. L. Kitselman, Jr., SE SE SW Sec. 2-1s-13e. S.D. slate 4,004 ft.

Union County—Schuler

Delta Drlg. Co. No. 1 Powledge, SW cor. NW NW Sec. 21-18-17. Top Jones sd. 7,599 ft.; cd. to 7,651 ft. and drld. to 7,686 ft.; 7-in. csg. 7,678 ft.; perf. csg. 7,609-22 ft. and 7,626-31 ft.; no flow; set 2-in. pkr. 7,600 ft.; no flow; S.I. and W.O.; C.P. 1,100 lbs.; T.D. 7,686 ft.; flw. by heads through csg. and tbg.; no chokes; est. 110 B.P.D.; W.O.

E. M. Jones No. 3-B Murphy Ld. Co., SW cor. SE NE Sec. 13-18-18. Drlg. red and gr. sh. 5,919 ft.

Lion Oil Ref. Co. No. 1 Banks, NW cor. SW SE Sec. 12-18-18. Set 10¾-in. csg. 1,920 ft.; top Jones sd. 7,579 ft.; T. L. 7,679 ft.; 7-in. csg. 7,714 ft.; T.D. 7,725 ft.

Lion Oil Ref. Co. No. 1 Cecil, SE cor., Lot 6, NW Sec. 7-18-17. 16-in. 125 ft.; T. Jones sd. 7,631 ft.; T.D. 7,765 ft.; rng. csg.

Lion Oil Ref. Co. No. 3 Dee, SW NW Sec. 17-18-17. Set 10¾-in. csg. 1,884 ft.; cd. top Jones sd. 7,551 ft.; fsg. D.S. 7,597 ft.

Lion Oil Ref. Co. No. 5 Marcus, Sec. 18-18-17. Top Jones 7,511 ft.; cd. top L. 7,607 ft.; T.D. 7,725 ft.; D.S. stk. 7,713 ft.; fsg. for 3,500 ft. D.S. after backing off 4,200 ft.; cutting out D.S. 7,725 ft.

Lion Oil Ref. Co. No. 6 Marine, NW cor. SW NW Sec. 18-17-17. Drlg. red sdy. sh. 7,010 ft.

Lion Oil Ref. Co. No. 7 Mayfield, C Lot 2, NW Sec. 18-18-17. Drlg. rd. sdy. sh. 6,875 ft.

Lion Oil Ref. Co. No. 4 Nelson, SW cor. Lot 5, SW Sec. 18-18-17. 10¾-in. csg 1,940 ft.; cg. 7,617 ft.

Marine Oil Co. No. 3 Calloway, SE cor. S½ Lot 4, NW Sec. 18-18-17. Drlg. red sdy. sh. 7,090 ft.

C. H. Murphy No. 1 fee, SE cor. SW NE Sec. 13-18-18. Cd. top Jones sd. 7,534 ft.; T. L. 7,627 ft.; T.D. 7,695 ft.; 7-in. 7,679 ft.

Phillips Pet. Co. No. 1 Amanda, SE cor. NE SE Sec. 12-18-18. Drlg. 2,100 ft.

Phillips Pet. Co. No. 2 Amanda, NE cor. NE SE Sec. 12-18-18. Set 16-in. csg. 210 ft.

Phillips Pet. Co. No. 2 Brian, C S½ NE SE Sec. 13-18-18. 10¾-in. 2,077 ft.; W.O.C. 2,108 ft.

Phillips Pet. Co. No. 3 Brian, NW SE Sec. 13-18-18. 16-in. csg. 191 ft.; drlg. 2,634 ft.

Phillips Pet. Co. No. 1 Edwards, SW NE Sec. 17-18-17. 7-in. csg. 7,704 ft.; perf. 7,628-35 ft.; would not flow and reperf. 7,626-35 ft.; T.D. 7,740 ft.; reperf. 7,624-35 ft.; washed and swbd.; would not flow; S.I.; W.O.; C.P. 400 lbs.

Phillips Pet. Co. No. 2 El Dorado, NW cor. NW SE Sec. 12-18-18. 10¾-in. csg. 2,104 ft.; W.O.C.

Phillips Pet. Co. No. 2 Miller, C N½ Lot 4, SW Sec. 18-18-17. Drlg. 2,910 ft.

Phillips Pet. Co. No. 6 Sewell, NE cor. Lot 3, SW Sec. 7-18-18. 10¾-in. 2,071 ft.; W.O.C. 2,100 ft.

Phillips Pet. Co. No. 7 Sewell, NE cor. Lot 4, SW Sec. 7-18-18. Drlg. 780 ft.

Phillips Pet. Co. No. 8 Sewell, SE cor. Lot 4, SW Sec. 7-18-18. 10¾-in. csg. 2,075 ft.

Phillips Pet. Co. No. 1 J. E. Stratford, SW cor. NW NW Sec. 17-18-17. 10¾-in. in. csg. 2,073 ft.; T.D. 2,103 ft.

Sam M. Richardson et al No. 1 B. Francis et al, NW cor. NW SW Sec. 7-17-13. Brkn. sd. S.O. 3,037-56 ft.; D.S.T. 3,011-56 ft. 15 min.; ¼-in. ck. T. and ¾-in. ck. B.; B.H.P. 700 lbs.; rec. 2,900 ft. oil; drld. to 3,242 ft.; cd. 3,242-67 ft. S.W. sd., small S.O.; 7-in. csg. 3,242 ft.; T.D. 3,269 ft.

Union County—Other

E. G. Bradham No. 1 Raulston, C Sec. 12-17-14. Cd. 2,980-90 ft.; sdy. sh.; S.O.; cd. 2,996-3,003 ft.; no rec.; cd. 3,003-05 ft.; rec. 6-in. por. sat. sd.; D.S.T. 2,971-99 ft.; 13 min.; ¼-in. bottm. ck.; 125 lbs. W.P.; flwd. 7 min.; will set csg.; T.D. 3,005 ft.; 7-in. csg. 2,972 ft.; drld. out 3,002 ft.; arng. test 3,002 ft.; O.T.D. 3,005 ft.; drld. out to 3,012 ft. and tstd. S.W.; drld. to 3,102 ft.; 5½-in. csg. 3,080 ft.; comp. 65 B.P.H., 8% B.S.&W.; ½-in. ck.; T.P. 250 lbs.; C.P. 450 lbs.; T.D. 3,105 ft.; perf. 2,996-3,002 ft.

E. G. Bradham No. 2 Raulston, SE Sec. 12-17-14. R.U.

Fohs Oil Co. No. 1 Craig, C SE NE Sec. 5-18-14. Top Nac. 2,203 ft.; D.S.T. 2½ min.; ⅝-in. cks.; rec. 40 ft. drlg. fluid; set 10¾-in. csg. 2,378 ft.; cd. top Tr. Pk. 3,068 ft.; top Crain sd. 3,158 ft.; drlg. hd. sh.; strks. red sh. 6,215 ft.

Hollywood & McFarlane No. 6 Scott-Murphy, NW cor. E½ SE NW Sec. 9-16-15. Drlg. sh. 1,107 ft.

Lion Oil Ref. Co. No. 9 Hardy-Murphy, NW cor. NE NW Sec. 9-16-15. Cd. sd. S.O. 2,295-2,321 ft.; 7-in. csg. 2,344 ft.; perf. 1,965-95 ft.; arng. test 2,349 ft.

J. R. Lockhart No. 1-A Raulston, NE cor. SW SE Sec. 12-17-14. Drlg. 1,200 ft.

J. H. Lockhart No. 4 Raulston, 330 ft. SW cor. NE SE Sec. 12-17-14. Cd. sd. S.O. 3,170-72 ft.; cd. 3,324-28 ft.; rec. 5 ft. gr. sh.; T.D. 3,329 ft.; D.&A.

Mellens, Brooks et al No. 2 Nash, NE cor. NE SW Sec. 7-17-13. R.U.

Ohio Oil Co. No. 6 Furlough, SE cor. SE NE Sec. 12-17-14. D.&A. 3,306 ft.

Snuggs, Sebersky & Bylick No. 1 Laney, C NE NE Sec. 28-17-14. D.&A. 3,480 ft.

NORTH MISSISSIPPI

Calhoun County

L. C. Lucas No. 1 E. C. Boland, 400 ft. E and 500 ft. S, NW cor. SW Sec. 9-22n-9e. Drlg. chalk 765 ft.

S. & O. Properties, Inc., No. 1 G. C. Cooner, SE NE Sec. 12-24n-8e. S.D. 2,300 ft.

Clarke County

Jeremiah L. Ryan No. 1 Eddins, Sec. 29-2n-14e. S.D. 80 ft.

George County

Cleve Love et al No. 2 J. J. Newman Lbr. Co., C SW Sec. 9-1s-8w. S.D. 7,038 ft., red beds.

Harrison County

Big Ridge Oil Co. No. 1 Hingin, Sec. 13-7s-10w. S.D. 2,700 ft.

Hinds County

G. Jefferys No. 1 Gaddis Farms, Inc., NW cor. SE Sec. 26-7n-4w. S.D. 3,448 ft.

Cleve Love et al No. 1 S. F. Johnson NE cor. SE¼ sec. 29-6n-1w. Set 7-in csg. 3,355 ft.; S.D. 5,177 ft.

Montgomery County

Dr. T. H. Chichester No. 1 Mitchell, Sec. 36-20n-7e. Drk.

Pontotoc County

Waldrop et al No. 1 Bray, Sec. 17-11s-1e. S.D. 310 ft.

Rankin County

Love Pet. Co. No. 3 Gulf State Creosote Co., Sec. 36-5n-2e. Drlg. bl. sh. 2,273 ft.; no report.

Simpson County

Cleve Love No. 1 N. E. Garner, SW cor. SW NE Sec. 1-10n-17w. S.D. 27 ft.

Goodwill O. & G. Co. No. 1 Berry, Sec. 33-2n-4e. S.D. 2,810 ft.

TEXAS

Week Ending December 3

GULF COAST FIELDS

Hastings Field—Brazoria County

Humble O. & R. Co. No. 3-C Cecil Brown, W. H. Snyder Survey. Drlg. sh. 3,029 ft.

Stanolind O. & G. Co. No. 2-C Cecil Brown, W. H. Snyder Sur. Drk.

Stanolind O. & G. Co. No. 6 Froberg, R. A. Magee Sur. T.D. 6,080 ft.; 7-in. csg. on bottom.

Stanolind O. & G. Co. No. 9 Surface, A. C.H.&B. Sur. T.D. 5,272 ft.; P.B. 2,575 ft.

Old Ocean—Brazoria County

Commerce Oil Co. No. 1 S. M. Patterson, Polly & Chance Sur. Drlg. sh. 7,036 ft.

Harrison & Abercrombie No. 3 Armstrong Plantation, Polley & Chance Sur. S.D. 8,878 ft.

Harris & Abercrombie No. 4 Armstrong, Polly & Chance Sur. Drlg. sh.&L. 6,876 ft.

Harrison & Abercrombie No. 3 Chenault, C. Breen Sur. R.U.

Harrison & Abercrombie No. 1 R. D. McDonald, C. Breen Sur. Drlg. sdy. sh. 9,638 ft.

Sun Oil Co. No. 1 Campbell, Chas. Breen Sur. T.D. 7,005 ft.; run. csg.

Sandy Point—Brazoria County

Stanolind O. & G. Co. No. 1 Sharp, C. S. Corbett Sur. No. 12. T.D. 8,943 ft.; abd.

West Columbia—Brazoria County

Mike Hogg No. 5 fee, M. Varner Sur. Drlg. sh. 3,139 ft.

Texas Co. No. 29 Abrams, G. Tennille Sur. 10¾-in. csg. 1,168 ft.; drlg. sdy. lime at 5,576 ft.

Cedar Point—Chambers County

Standard Oil Co. of Texas et al No. 4-118 State. R.U.

Seabreeze—Chambers County

Sun Oil Co. No. 5 Acom, H.T.&B. Sur. No. 103. Drk.

Sun Oil Co. No. 1 Tate, H.T.&B.R.R. Sur. T.D. 8,634 ft.; P.B. 2,000 ft. to sdtrkd. at 2,609 ft.; T.D. 8,581 ft.; 7 in. csg. 8,581 ft.; P.B. 8,465 ft.; swbg.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1-38 State (6,000 ft. S of field in Turtle Bay) 10¾-in. csg. 1,212 ft.; drlg. sd. &L. 8,310 ft.

Hitchcock—Galveston County

Maco Stewart No. 10 fee, J. Spillman Sur.; drlg. sh. 2,630 ft.

League City—Galveston County

Mid-States Oil Co. No. 1-A, Maco Stewart, Perry & Austin Sur. Coring sh. 8,826 ft.

George Echols No. 1 Maco Stewart-Ross, Lot 3, Perry & Austin Sur. Drlg. sh. Coring sh. 9,078 ft.

George Echols No. 1 Maco Stewart, Perry & Austin Sur. Loc.

Phillips Pet. Co. No. 1 Dr. Patton, S. F. Austin Sur. R.U.

West Prod. Co. No. 1 fee, Lot 2, Blk. 5, Perry & Austin Sur. Loc.

Bammel—Harris County

H. M. Lawrence and Geo. Lawrence No. 1 C. Ehrkardt, H. Simmons Sur. R.U.

Clinton—Harris County

Stanolind O. & G. Co. No. 2 Edwards Reels & Trobough Sur. Drk.

Eureka—Harris County

Jack Frazier No. 1 Emma Helberg, J. Reinerman Sur. Drlg. sh. 2,730 ft.

Jack Frazier No. 2 Hogg Bros., J. Reinerman Sur. 10¾-in. csg. 2,507 ft.; T. D. 7,762 ft.; cd. sd.; tstd. sw. 7,726-32 ft.; sqzd. perf.; reperf. csg.; tstg.

Houston Oil Co. No. 3 Helberg & Lackner, J. Reinerman Sur. Loc.

Tide Water Asso. Oil Co. No. 1 M. A. Roy, J. Reinerman Sur. Drlg. sh. 2,836 ft.

Fairbanks—Harris County

Amerada-Stanolind O. & G. Co. No. 1 Ariola, G. Williams Sur. 9⅝-in. csg. 1,217 ft.

Amerada-Stanolind O. & G. Co. No. 2 Foley, W. K. Hamblin Sur. Drlg. sh. at 5,300 ft.

Amerada-Stanolind O. & G. Co. No. 1 Ley, J. Waugh Sur. Perf. csg. at 6,840-46 ft.

Amerada-Stanolind O. & G. Co. No. 1 Munger, P. B. Hamblin Sur. T.D. 6,843 ft.; perf. csg. 6,832-39 ft.

Amerada-Stanolind O. & G. Co. No. 2 Peters, W. K. Hamblin Sur. and Hogan Sur. T.D. 7,920 ft.; 5½-in. csg. 7,548 ft.; perf. csg. 6,963 ft.; tstd. S.W.

Amerada-Stanolind O. & G. Co. No. 1 G. W. Stinson Sur. Drlg. sh. 1,510 ft.

E. M. Hailey No. 1 Albert Brown, J. Clarkson Sur. Loc.

Noble & Baker et al No. 1 A. R. Hillegeist, J. Clarkson Sur. T.D. 6,852 ft.; 5½-in. csg. on bttm.; tstg.

Windsor Oil Co. No. 1-A C. D. Ley, G. Ayers Sur. Drlg. sh. 6,238 ft.

Friendswood—Harris County

Humble O. & R. Co. No. 24 Beamer, T. Choate Sur. Drlg. sh. 5,967 ft.

Humble O. & R. Co. No. 19 Gray, Perry & Austin Sur. Drlg. sd. 3,036 ft.

Humble O. & R. Co. No. 8 Herman Hospital, T. Choate Sur. Drlg. sh. 5,237 ft.

Humble O. & R. Co. No. 1 J. L. Jones, Perry & Austin Sur. Drk.

Humble O. & R. Co. No. 3 Settegast, T. Choate Sur. Drk.

Humble O. & R. Co. No. 1 E. E. Watson Drk.

Humble O. & R. Co. No. 5 West Prod., T. Choate Sur. Drlg. sh. 4,329 ft.

Cordele—Jackson County

Lewis Prod Co. No. 2 Drushel, I.&G.N. Sur. No. 10. Drk.

H. J. Porter No. 1 Woussi, Peter White Sur. Loc.

Clam Lake—Jefferson County

Shell Pet. Corp. No. 3 McFaddin, S. A. Pace Sur. 10¾-in. csg. 1,532 ft. T.D. 6,766 ft.; 5-in. csg. 6,028 ft.; P.B. 5,975 ft.; perf. csg. 5,955-66 ft.; made sqz. job; prep. to test. Swabbing.

LaBelle—Jefferson County

Sun Oil Co. No. 4 Broussard-Hebert, B. Blackman Lge. T.D. 8,675 ft.; 7-in. csg. 8,605 ft.; pmpg. wtr. into hole to kill press. in No. 3 Broussard; made sqz. job; dpnd. 8,680 ft.; fsg. for D.P. milling out of csg. 8,466-70 ft. Coring sd.&sh. 8,710 ft.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 5 J. H. Phelan, S. Stivers Sur. T.D. 8,687 ft.; 7-in. csg. on bttm.; perf. csg. 8,404-12 ft.; flowed 31 bbls. dist. 20 hrs.; ¼-in. choke.

Hardin—Liberty County

Fohs Oil Co. No. 1 Tompkins, H. B. Johnston Sur. T.D. 7,620 ft.; 5½-in. csg.; 7,620 ft.

Gulf Oil Corp. No. 4 Cessna, H. B. Johnston Sur. R.U.

Humble O. & R. Co. No. 7-A Partlow, H. B. Johnston Sur. T.D. 7,625 ft.; 5½-in. csg. 7,605 ft.

Shell Pet. Corp. No. 1-B West, A. B. Hardin Sur. R.U.

Texas Co. No. 1 Smith, A. B. Hardin Sur. T.D. 7,667 ft.; run. 5½-in. csg.

Tide Water Associated Oil Co. No. 4 Cessna, A. B. Hardin Sur. T.D. 7,658 ft.; 5½-in. csg. 7,658 ft.

Woodley Pet. Co. No. 1 Humphries, F. Hardin Sur. Drlg. sh.&L. 7,219 ft.

Orange—Orange County

Orange Pet. Corp. No. 1 Chesson, Wm. Dyson Sur. R.U.

Gulf Oil Corp. No. 3 Granger, Wm. Dyson Sur. Drlg. sh. 5,949 ft.

John G. Mayo No. 1 Seales, Wm. Dyson Sur. 10¾-in. csg. 1,000 ft.; T.D. 6,179 ft.; swabbing.

Red Bank Oil Co. No. 1 First Natl. Bank, Wm. Dyson Sur. Coring sh. 5,563 ft.

Union Prod. Co. No. 1 Lutcher Moore Lbr. Co., J. Dyson Sur. 10¾-in. csg. 1,000 ft.; drlg. sdy. sh. 5,237 ft.

Segno—Polk County

Gulf Oil Corp. No. 4 Ragan, I.&G.N. Sur. No. 15. 10¾-in. csg. 2,160 ft.; drlg. sh. &L. 7,936 ft.

Gulf Oil Corp. No. 5 Ragan, I.&G.N. Sur. No. 15. Loc.

Humble O. & R. Co. No. 10-B Kirby Lbr. Co., M. Victor Sur. Loc.

Providence Oil Co. No. 1 Wing, I.&G.N. Sur. No. 14. Drlg. sh. 7,686 ft.

Spurger—Tyler County

Republic Prod. Co. No. 14 Hurd, N. Hurd Sur. R.U.

GULF COAST WILDCATS

Austin County

Crown Cent. Pet. Corp. et al No. 1 Huebner, Renkestolz Sur. Loc.

Brazos County

N. W. Hunter No. 1 Jerichew, E. M. Millican Sur. M.I.M.

Brazoria County

Fabriguze et al No. 1 Freeport Sulphur, Stephen F. Austin Sur. (Bryan Mound). M.I.M.

Gray, Wolfe and Mayo No. 1 Joe D. Hughes, F. B. Drake Sur. T.D. 710 ft.; run 9⅝-in. csg.

Humble O. & R. Co. No. 1 Masterson, Geo. Robinson Sur. 13⅜-inch csg. 2,402 ft.; drlg. sh. 8,469 ft.

Humble O. & R. Co. No. 1 Tuttle, H.T.&B. Sur. No. 67, Lots 51 and 52. T.D. 8,221 ft.; abd.

David B. MacDaniel No. 1 J. E. Rawald, Mary V. O'Donnell Sur. Drlg. sh. 3,405 ft.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.

Colorado County

Coyle & Concord No. 4-B Powell, I.&G. N. Sur. No. 45. R.U.

Galveston County

H. C. Cockburn No. 1 O. H. Hardt-Stephen, F. Austin Sur., 2 mi. N of League City discovery well. T.D. 9,000 ft.; abd.

Harris County

Carroll Oil Co. et al No. 1 N. A. Means, T. J. Green Sur. T.D. 7,007 ft.; abd.

C. L. Dobbins et al No. 1 Ridgeview Farms, D. Steele Sur. 10¾-in. csg. 840 ft.; drlg. sh. 5,026 ft.

Jack Frazier et al No. 1 W. T. Carter, Talcott Patching Sur. Suspended.

Jack Frazier et al No. 1 Griffith, Adams Smith Sur. T.D. 8,348 ft.; P.B. 4,088 ft.; 5½-in. csg. 4,090 ft.; perf. csg. 4,073-77 ft.; flowing ½ bbl. fluid per hour, 10% oil, balance wash wtr.

H. H. Givens No. 2 F. K. Adone, David Middleton Sur. Drk.

Smith & McDannald No. 1 F. Molk, John Gay Sur. 10-in. csg. 1,080 ft.; T.D. 7,846 ft. Circ.

Jackson County

Chapman Minerals Corp. No. 1 Bennett ranch, Valentine Garcia Sur. Drlg. sh. 5,151 ft.

Crosby Drlg. Co. No. 1 John Broughton, Patrick Green Sur. T.D. 7,414 ft.; recovered 1,500 ft. oil; D.S.T. 7,391-7,414 ft.; 7-in. csg. 7,415 ft.; perf. csg. 7,393-97 ft; flowing 12 B.F.P.H.; ¼-in. ck.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. T.D. 5,840 ft.; D.S. stk.; pulled in two. S.D.

Humble O. & R. Co. No. 2 Jefferson Ld. Co., C. Hillebrandt Sur. Drlg. sh. 3,036 ft.

Humble O. & R. Co. No. 13-B McFaddin-State, Sec. 8, 10¾-in. csg. 2,758 ft.; drlg. sh. 3,690 ft.

Matagorda County

Maja Oil Co. No. 1 Robbins, A. Sheppard Sur. R.U.

Montgomery County

Deep South Pet. Corp. No. 1 Foster Lbr.

Co., Preyor Bryan Sur. 10¾-in. csg. 700 ft.; T.D. 7,020 ft.; abd.
Housh & Thompson No. 1 E. B. Clary, Wm. S. Allen Sur. T.D. 4,739 ft.; 7-in. csg. 4,736 ft.; flwg. dry gas, volume test through ⅜-in. ck. 3,420,000 ft.
H. A. Pennington et al No. 1 F. L. Banker, L. M. H. Washington Sur. R.U.
J. Smith et al No. 1 J. V. Scott. F. A. B. Wheeler Sur. S.D. 380 ft.

Orange County

Sun Oil Co. No. 1 Lutcher-Moore Lbr Co., B. Johnson Sur. T.D. 7,867 ft.; P.B.; sdtrkd.; cg. sh. 8,612 ft.

Wharton County

Crown Cen. Pet. Corp. et al No. 1 Ruby Babcock, Samuel B. Middleton Sur. T.D. 5,514 ft.; P.B. to test sd. 4,430-40 ft.; abd.

S. W. TEXAS WILDCATS

Atascosa County

R. C. Stanley No. 1 Schumann, Simon Malone Sur. No. 1069. T.D. 1,722 ft.; perf. csg. 1,650-75 ft.; S.D.

Bastrop County

Ira Brown No. 1 T. W. Bailey, John Crutchfield Sur. No. 12. M.I.M.
R. C. Franklin No. 2 Yarrington, Jose Manuel Bangs Sur. S.D. 2,150 ft.
Paul Texas and Ashby No. 1 J. T. Grizzard, Andrew Graham Sur. D.S.T. 7,088-23 ft.; recvd. 1 thin. of mud; S. S.O.; 4¾-in. csg. 7,152 ft.; swbg. salty sulfur wtr.; T.D. 7,175 ft. (cor.); P.B. to 7,150 ft.; drlg. plug; tstd. sulfur wtr.; P.B. into csg. to perf. csg. 7,023-30 ft.; swbg. salty sulfur wtr. 7,165 ft.

Bee County

Bunn-Texas Co. No. 2 Sparkman, Asa Walker Sur. T.D. 4,026 ft.

Bell County

M. M. Gordon No. 1 Steele, Oliver T. Tyler Sur. S.D. 1,201 ft.
G. P. Shelton et al No. 1 Nelson, Michael Griffin Sur. S.D. 1,160 ft.

Bexar County

H. G. Krumm No. 1 Kempf, Samuel McCollough, Jr., Sur. No. 54. Drlg. 285 ft.
L. G. Priest et al No. 1 E. B. McCollough, Stephen Jett Sur. Drlg. sdy. sh. 1,004 ft.
Charles Schreiner No. 1 McCloskey, L. Desague Sur. No. 134. Drlg. sdy. sh. 725 ft.

Blanco County

D. M. Johnston No. 1 Glasscock, W. W. McDonald Sur. No. 50. 10-in. csg. 150 ft.; S.D. 501 ft.
E. L. Nixon No. 2 Crist, John McClenechen Sur. No. 94. Drlg. 35 ft.

Caldwell County

Lincoln Pet. Co. No. 1 Sarah McBane, Francis Berry Sur. Drlg. 1,312 ft.

Calhoun County

Hiawatha O. & G. Co. No. 2 J. J. Roemer, J. Ogesberry Sur. Drlg. sh. 10,186 ft.
Joe Wagner et al No. 1 Florence Lamm, Manuel De Luna Sur. No. 3. R.U.

De Witt County

Richardson et al No. 1 W. D. McCurdy, John Hunt Sur. T.D. 150 ft.

Duval County

Harry Fansler No. 1 Benavides, El Mesquite gr. Drlg. sh. 2,286 ft.
Magnolia Pet. Co. No. 1 Duval Co. Rch. Co., G.C.&S.F.R.R. Sur. No. 189. Drlg. sh. 610 ft.
Magnolia Pet. Co. No. 2 Duval Co. Rnh. Co., G.C.&S.F.R.R. Sur. No. 189. T.D. 1,451 ft.; I.P. 50 B.P.D. pumping.
J. J. O'Hern No. 1 S. Benavides, G.C.& S.F.R.R. Sur. No. 169. 10-in. csg. 42 ft.; drlg. 2,906 ft.
S. K. & C. et al No. 2 Welder, Nathaniel Tinsley Sur. 10-in. csg. 19 ft.; S.D. 2,460 ft.
S.K.&C. et al No. 3 Welder, Nathaniel Tinsley Sur. Loc.
W. A. Wagner No. 1 D. J. Welkel, John H. Gibson Sur. No. 497. R.U. and S.D.

Edwards County

Evans & Love No. 1 Steve Brown, Blk 6, G.W.T.&P. Sur. S.D. 6,261 ft.

Frio County

Humble O. & R. Co. No. 1 Houston et al, M. Rips Sur. 10¾-in. csg. 1,300 ft.; tstd. S.W. 130 ft. oil and mud; D.S.T. 5,219-26 ft.; T.D. 5,302 ft.; abd.
Geo. Smith No. 1 Berry, T.C.R.R. Sur. No. 1, T.A.C. 4,445 ft.; drlg. 4,867 ft.

LEGAL

Pursuant to an order entered in Cause No. 99620-D, styled Lonnie Glasscock vs. T. H. P. Duncan, I offer for sale, as receiver, to the highest bidder for cash, a 20-acre oil and gas lease, Duncan fee, Penn Survey, Gregg County, Texas.

This property has three producing wells, with the possibility of an additional permit.

All bids shall be posted with me, as receiver, on or before January 18, 1939.

For full details and all information concerning the property, communicate with the undersigned.

Fred Mellen, Receiver
728 Wilson Building
Dallas, Texas

Goliad County

J. D. Brock et al No. 1 Dial, Pedro Trevino Sur. Drlg. sh. 4,537 ft.
Steinberger Pet. Corp. No. 1 Albrecht, T. Hancock Sur. T.D. 5,313 ft.; 5½-in. csg. 5,313 ft.; perf. csg. 5,238-45 ft.; flowing oil and wash wtr. by heads.

Gonzales County

Hochheim Dev. Trust No. 1 Dubose, E. G. Coffman Sur. 10-in. csg. 37 ft.; S.D. 500 ft.
John Hueners et al No. 1 Bauer, R. E. Brown Sur. S.D. 1,017 ft.

Guadalupe County

Catherine Brown No. 1 Davis, L. A. Patillo Sur. Drlg. 1,550 ft.
R. Hamil et al No. 1 E. Zuehl, Vicente Duran Sur. No. 4. 10-in. csg. 21 ft.; drlg. 507 ft.
Joseph Holefield No. 1 Claud Brodnax, John King Sur. Spudded and S.D.
A. D. King No. 1-A Rosenbrock, Vincente Duran Sur. No. 4. T.D. 1,882 ft.; Buda L.; 6-in. csg. 991 ft.; swbg. and flwg. 3 B.O.P.H.; started showing S.W.; cmtd. off bttm. of hole.
E. H. Robertson No. 1 Alex Forshage, Eligio Gortari Sur. No. 16. Drlg. 1,210 ft.
Wellington Oil Co. of Delaware No. 1 Albert Mattke, Wm. H. Smith Sur. No. 62. T.D. 1,849 ft.; abd.
R. A. Williams No. 1 Weber, Guadalupe Torres Sur. T.D. 1,483 ft. (cor.); 4½-in. csg. 1,468 ft.

Hidalgo County

R. E. Hardin et al No. 1 E. M. Car Hidalgo Co. Canal Subd., Lot 8. Blk 8. T.D. 7,509 ft.; perf. csg. 7,440-65 ft.; tstd. 500,000 ft. gas, 9 bbls. dist.; W.P. 1,700 lbs.; killed well; reperf. csg. 6,918-30 ft.; tstg.
Phillips Pet. Co. No. 1 Flores (deep test N of Samfordyce field). Cmtd. 7⅝-in. csg. 5,847 ft. (protection string); T.D. 9,708 ft.; P.B. 5,940 ft.; perf. csg. 5,840-5,900 ft.; tstg. showing gas and distillate.
Union Sulphur Co. No. 1 Am.-Rio Grande Ld. & Ir. Co. (Mercedes). Cmtd. 7-in. csg. 8,417 ft.; T.D. 9,618 ft.; 5½-in. lnr. set 8,369-9,618 ft.; tstd. S.W. 9,420-30 ft.; made sqze. job; P.B. 9,390 ft.; perf. csg. 9,372-80 ft.; swbd. S.W and gas; perf. csg. 9,347-52 ft.; tstd S.W.; perf. csg. 9,255-80 ft.; tstd. S. W.; perf. csg. 9,065-70 ft.; tstd. S.W.; perf. csg. 8,990-9,000 ft.; tstd. S.W.; perf. csg. 8,920-25 ft.; tstd. S.W.; perf. csg. 8,845-50 ft.; flwd. 24 bbls., 51-grav. dist. per day; ⅝-in. ck.; killed to reperf.; sqz. off perf.; prep. to test 8,500-10 ft.; tstd. gas and S.W.; sqzd. perf. csg. 8,480-90 ft.; tstd. gas and S.W.; sqzd.; reperf. csg. 8,075-80 ft., tstd. 450 bbls. fluid, 45 bbls. 22.7 grav. oil; sqzd. off perf.; perf. csg. 7,920-25 ft.; perf. csg. 7,430-40 ft.; tstg.

Jim Hogg County

Humble O. & R. Co. No. 3 Anna Kelsey Bass, San Raphel gr., 3,732 ft. N of Kelsey field discovery well. Recvd. 500 ft. of oil; 25 lbs. press.; D.S.T. 4,700-56 ft.; T.D. 5,380 ft.; 7-in. csg. 5,146 ft.; perf. csg. 4,730-35 ft.; flowed oil and S.W.; squeezed off perf.; W.O.C.
Johnson & Robinson No. 1 Palacios. Mary Montgomery Sur. Drlg. 490 ft.
Navarro Oil Co. No. 1 Guerra, Santa Teresa gr. (7,000 ft. SW discovery, Kelsey field). 10¾-in. csg. 1,231 ft.

Jim Wells County

Tom Graham et al No. 1 Chas. Hirsch, Jacob Stanfert Sur. T.D. 5,760 ft.
Magnolia Pet. Co. No. 1 Samuel Maun, Los Olmos y Loma Blanca gr. Drlg. sh. 3,110 ft.
Shell Pet. Corp. No. 1 C. H. Von Blucher, Lucinda Best Sur. T.D. 7,332 ft.; 7-in. csg. 7,332 ft.; perf. csg. 7,327-30 ft.; cg. hd. sd. 7,543 ft.

Karnes County

M. W. Brown et al No. 1 Yanta, S. G. Hardaway Sur. S.D. 2,778 ft.
Formax Oil Co. No. 1 Pflugger, Erasmus Seguin Sur. S.D. 1,969 ft.
Suttle et al No. 1 McKinney, Luz Navarette Sur. Loc.

Kendall County

Carpenter No. 1 Seidensticker, A. Rodriquez Sur. No. 257. S.D. 518 ft.
C. M. Dewey No. 1 Seidensticker, J. M. Cherino Sur. No. 18. S.D. 545 ft.
H. N. Reid No. 1 Marguardt, J. Travuse Sur. No. 150½. T.D. 985 ft.; fsg.

Kerr County

J. O. Hart et al No. 5-E Jeff Love, J. Martinez Sur. O.W.D.D. Drlg. L. 5,643 ft.
H. C. Starkey No. 1-A Saue, T.W.N.G. R.R. Sur. S.D. 100 ft.

Kimble County

Plateau Oil Co. No. 1 S. J. Davis, N Mitchell Sur. No. 44. S.D. 1,140 ft.
Plateau Oil Co. No. 1 Hunger, J. Dujne Sur. T.D. 1,837 ft.; 5½-in. csg. 1,765 ft.; pumped little oil and acid with shot 120 qts. 1,790-1,835 ft.; tstg.

Kinney County

Bob Rose No. 2 Gaebler, Dolores Soto de Beales gr. S.D. 225 ft.
C. B. Wardlaw No. 1 Standart, Meliton Valdez gr. S.D. 1,340 ft.

Kleberg County

Pure Oil Co. et al No. 1 State Ld., Tr. 68, Laguna Madre Bay, Lse. No. 528 T.D. 9,350 ft.; sdtrkd. 8,268 ft.; T.D. 9,636 ft.; perf. csg. 7,269-78 ft. and 7,248-56 ft.; tstd. gas and S.W.; sqzd. off perf.; reperf. csg. 7,210-30 ft. 7,239-56 ft., and 7,269-78 ft.; comp. as gas well.

La Salle County

Lake-Tobian Oil Co. No. 1 O'Connor ranch, Blk 35, Bland & Nelson subd S.D. 2,915 ft.; cleaned hole; prep. to resume operation.

Lavaca County

A. C. McCord et al No. 1 Cora Russek, Blk. 33, J. C. Reynolds Sur. (S. of Ezzell). Spd. and S.D.

Lee County

Fred Pederson et al No. 1 Brown, Davis-Hudson Sur. Cd. L., oil odor, 6,100-12 ft.; T.D. 6,404 ft. (cor.); 7-in. csg. 6,380 ft.

Live Oak County

R. H. Feltner No. 1 Reed, I.&G.N. R.R. Sur. 15. R.U.

McLennan County

Roy Clements No. 1 Carl Horstman, D. C. Walters Sur. S.D. 1,251 ft.; prep. to resume operating.

McMullen County

Loma Oil Co. No. 1 Edrington A. B. & M. Sur. No. 79. Location.
Scarborough & Bigiane No. 1 Matuis Emmitt, Jas. Garner Sur. No. 6. T.D. 880 ft.; C.O.

Maverick County

Rio Dev. Co. No. 5 State Bnk. & Trst. Co., G.C.&S.F.R.R. Co. Sur. No. 1. S.D. 45 ft.
Wellington Oil Co. of Delaware and Humble O. & R. Co. No. 2 Indio Cattle Co. Antonio Rivas Grant. Cuevas Pasture No. 2. Drlg 530 ft.

Medina County

C. H. Gannon et al No. 1 Saathoff, G. L. Hemeken Sur. No. 833. S.D. 1,350 ft.
Victor Ziegler No. 1 Paul Haby, Wm. G. Still Sur. No. 1. T.D. 81 ft.

Nueces County

L. A. Douglas No. 1 L. E. Smith, C.E.I.P.& M. Sur. No. 459. Drlg. 2,600 ft.
Humble O. & R. Co. No. 1 Michalek, Lots 4 and 5, Sec. 97, Bishop Out Lot subd. Drlg. sh. 6,676 ft.
Seaboard Oil Co. No. 1 Ellen C. Wilson, Jose Vicente Lopez de Herrera gr. T.D. 6,541 ft. Well blew out, caught fire, cratered, abd.
Stanolind O. & G. Co. No. 1 Geo. R. Clark, Nueces Co. Winter Vegetable Gardens. Drlg. sh. 6,638 ft.
Texas Co. No. 1 E. Little et al, Wm Little Sur. 10¾-in. csg. 1,174 ft.; T.D 7,746 ft.; fsg.; P.B. to sdtrk.; trying to sdtrk. at 5,300 ft.
Trinity Drillers, Inc., No. 1 L. E. Smith, C.E.P.I.&M. Sur., Sec. 6, Blk. "C." Drlg. sdy. sh. 2,225 ft.
Union Prod. Co. No. 1 Minnie Brow (Agua Dulce area). Drlg. sh. 12,936 ft.

Real County

Blakely Smith et al No. 1 Love Ranch H.E.&W.T.R.R. Co. Sur. Drlg. 495 ft. no report.

Refugio County

G. S. I. et al No. 1 Michna, Aldrete 6¼ Lge. Recovered oil; D.S.T. 6,315-29 ft. T.D. 6,357 ft.; perf. csg. 6,330-35 ft.; testing.
G. S. I. et al No. 4 Rooke, Aldrete 6¼ Lge. Drlg. sh. 5,137 ft.
Hewitt & Daugherty No. 1 Rooke, Aldrete Sur., Sec. 6. T.D. 5,903 ft.; perf. csg. 5,893-5,900 ft.
Illinois Pet. Co. et al No. 1 C. F. Sasse, Aldrete 6¼ Lge. Coring sd. 5,880 ft.
Phillips Pet. Co. et al No. 1 Emilie Paveleck, Aldrete 6¼ Lge. Loc.
Rutherford Oil Corp. No. 1 Neiman, Estaban Lopez Sur. Coring 5,406 ft.

Starr County

Circle Oil Co. No. 1 Sabas Olivarez, C C.S.D.&R.G.N.G. Sur. No. 241. 8½-min. D.S.T. 4,560-73 ft.; recvd. 425 ft. oil; 90 lbs. press.; T.D. 4,921 ft.; D.S. T. 4,908-21 ft.; rec. 500 ft. oil; T.D. 5,150 ft.; 7-in. csg. on bttm. Perf. csg. 5,115-22 ft.; testing.
Pistol Hill Oil Co. No. 1 Alvarez, J. J. Guiterrez, Porc. 72. Drlg. sh. 776 ft.
Rhinehart and Bowman No. 1 J. E. Bowman, J. C. McCarty Sur. Loc.
Sun Oil Co. No. 2 McKinney, A. J. Smith Sur. No. 242. Drlg. sh. 2,027 ft.
Sun Oil Co. No. 1 N. R. Montalvo, Los Retachez gr., Juan Jose Sais Sur. No. 347. R.U.
Transwestern Oil Co. No. 1 Dallas Jt. Stk. Ld. Bnk., Gavino Silvas Sur. 9⅝-in. csg. 1,439 ft. Coring sh. 4,830 ft.

Webb County

O. W. Killam No. 1 A. M. Bruni, Alberca De Arriba gr. T.D. 2,252 ft.; abd.
Magnolia Pet. Co. No. 1 Duval County School Land. Duval County School Land League No. 101. Loc.
Richardson Pet. Co. No. 1 A. M. Bruni, H.&G.N.R.R. Sur. No. 17. Loc.
R. F. Spear No. 1 Benavides, M. Arispe gr., C Blk. 41. T.D. 3,596 ft.; abd.
Superior Oil Co. No. 2 Masterson, C.C.S.D. & R.G.N.G.R.R. Sur. No. 17. Loc.

Williamson County

W. O. Caffey No. 1 Fuchs, Francis Bradley Sur. No. 6. T.D. 1,125 ft.
H. H. Coffield and Taylor Ref. Co. No. 2 Caller, H.T.&B. Sur. No. 7. Drlg. sh. 850 ft.

Victoria County

Wellington Oil Co. of Delaware No. 1 Boothe, Indianola R. R. Co. Sur. No. 10. S.D. 4,320 ft.; abd.

Wilson County

Stapper Oil Co. No. 1 J. McDaniel, L. Manchoca Sur. T.D. 3,100 ft.; T.A.

Zapata County

Joe Martinez No. 1 F. Zaragosa, J. V. Borego gr. Drlg. sh. 1,269 ft.

EAST TEXAS

(Border Counties)

Harrison County

F. H. Barnwell No. 1 Smith, A. P. Hope Sur. Cg. 2,830 ft.; D.S.T. 2,280 ft. tstd. dry.

Marion County—Rodessa

Ark.-La. Gas Co. No. 1 Moseley, Alex. Johnson Sur. Drlg. 5,516 ft.
Bender & Killingsworth No. 2 J.&N.W., Wm. Smith Sur. Comp. 8 B.P.H., ½-in. ck.; 5-in. csg. 6,026 ft.; T.D. 6,043 ft.; T.P. 350 lbs.; C.P. 1,250 lbs.
Cable Tool Drlg. Co. No. 1 Howard, John Hanks Sur. Drlg. L.&sh. 5,871 ft.
Cable Tool Drlg. Co. No. 1 Schellinger, John Hanks Sur. Drlg. sh.&L. 4,456 ft.
Gulf Prod. Co. No. 2-A Ray, John Hanks Sur. 9⅝-in. csg. 1,967 ft.; arng. make D.S.T. 6,080 ft.
G. Scott Hammond No. 1 W. S. Ford, C. Grayson Sur. 9⅝-in. csg. 1,262 ft.
Harry Hanbury No. 1 Davis, W. R. Meyer Sur. Drlg. sh.&L. 3,934 ft.
Phillips Pet. Co. No. 2 Henderson, T. Gillespie Sur. Drlg. L.&sh. 5,885 ft.
Shell Pet. Corp. No. 1 Stephenson, G. Perry Sur. 8⅝-in. csg. 1,013 ft.; 5-in. csg. 5,991 ft.; perf. 5,973-90 ft.; swbg. to test 5,996 ft.
Texas Co. No. 2 Braden, Jos. M. Fitzgerald Sur. 7-in. csg. 6,011 ft.; T.D. 6,030 ft.; comp. 26 B.P.H., ½-in. ck.; T.P. 100 lbs.; C.P. 150 lbs.
Union Prod. Co. No. 10 Hutchinson, A. D. S. Coy Sur. 9⅝-in. csg. 1,019 ft.; 7-in. csg. 6,103 ft.; T.D. 6,140 ft.

Marion County—Other

Capps Bros. Lbr. Co. No. 2 Stiles, Wall Sur. T.D. 2,394 ft.; swbd. dry; shot with 2 qts. nitro at 2,334 ft.; tstd. dry; S.D. 2,394 ft.
Geyer Oil Co. No. 6 Vincent, C. Davenport Sur. T.D. 2,408 ft.; comp. pmpg. 5 B.P.D., 25% S.W.; 6-in. csg. 2,408 ft.

Sabine County

Hugo Allen No. 1 Brooks, Isaac Low Sur. S.D. 5,885 ft.; flows ½ to 3 bbls. 41-grav. oil and goes dead; C.P. 500 lbs.; will attempt to comp. as gas well.

Shelby County

Redditt & Gray No. 1 Pickering Lbr. Co., Childers Sur. Set 7-in. 5,080 ft.; T.D. 5,139 ft.; making est. 100,000,000 ft. gas with 55-grav. brown dist.; C.I.C.P. 2,500 lbs.; C.I.T.P. 2,300 lbs.

WEST TEXAS WILDCATS

Andrews County

Anderson & Prichard-Osage Drlg. No. 1 Univ., Sec. 13, Blk. 14, Univ. Sur. Loc.
Honolulu Oil Corp. No. 1-18 J. E. Parker, Sec. 18, Blk. A-44, P.S.L. Sur. Loc.
Olson Drlg. Co. No. 1 Lockhart-Brown, 5 mi. W of S end of Fuhrman pool. S.D.O. 4,981 ft.
Texas Co. No. 1-H University, Sec. 4, Blk. 14, Univ. Sur. S.D.O. 4,857 ft.
J. W. Tripplehorn No. 1 M. A. Thornberry, Sec. 2, Blk. 42-A. Prep. treat 4,477 ft.
L. H. Wentz No. 1-L W. F. Cowden, Sec. 3, Blk. 43, T.&P. Sur. P.B. 4,428 ft.; tstg.
H. C. Wheeler, No. 1 White-Shelton, Sec. 18, Blk. 36-A, P.S.L. Sur. Drlg. 4,625 ft.

Coke County

Barnett Pet. Co. No. 1 J. R. Mims, Sec. 39, Blk. W, T.&P. Sur. S.D. 1,861 ft.

Culberson County

Quito Oil Co. No. 1 Cameron Lbr. Co., Sec. 24, Blk. 81, P.S.L. Sur. S.D.R. 945 ft.

Dawson County

Daw-Tex. Oil No. 1 J. E. Neely, Sec. 28, Blk. 35, T.&P. Sur. R.U.R.

Dickens County

Bond D. Jones No. 1 Ford et al, I.&G.N. Sur. S.D. 3,508 ft.
Humble O. & R. Co. No. 1 Matador Ld. & Cattle Co., Sec. 26, Blk. 1, Shock & Arnold Sur.; 6,000-ft. test. Rng. 10-in. 440 ft.

Ector County

Fields et al No. 1 Owenwood, Sec. 6, Blk. 44, T.&P. Sur. S.D.O. 4,501 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel, S.D. 3,571 ft.

Garza County

Gulf Oil Corp. No. 1 Swanson, Sec. 25, Blk. 2, H.&G.N. Sur. W.O.C. 7,400 ft.

Glasscock County

Crusader Pet., Inc., No. 1 A. D. Neal, Sec. 20, Blk. 33, T.&P. Sur.; 3,200-ft. test. Drlg. 2,220 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1

Thaxton, SE¼ Sec. 34, Blk. 74, Twp. 6. U.R. 5,234 ft.
Haymon Krupp No. 1 Briggs, Sec. 24, Blk. 73, Twp. 7, T.&P. Sur. W.O.C. 5,365 ft.

Jeff Davis Parish

Joiner Oil Corp. No. 1 Jones-Coffield. S.D. 3,742 ft.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., Sec. 151, H.E.&W.T. Sur. W.O.C. 4,450 ft.

Menard County

C. D. Haggerty No. 1 Callon, Sec. 36, Jim Franz Sur. Tools out; making 500,000 ft. gas 1,270 ft.; S.D. 1,270 ft.

Mitchell County

Ajax Drlg. Co. No. 1 Schustes, Sec. 25, Blk. 17, S.P.R.R. Sur. Drlg. 500 ft.

Pecos County

G. T. Abell et al No. 1 Baldwin Est., Sec. 24, Blk. 9, H.&G.N. Sur. R.U.
J. R. Bell No. 1-C Gulf-Shearer, Sec. 111, Blk. 10, H.&G.N. Sur. S.D.R. 240 ft.
O. E. Schade No. 1 Neville, Sec. 72, Blk. 194, G.C.&S.C. Sur.; 2,500-ft. test. Drlg. 1,935 ft.
O. E. Schade No. 1 Otis Garrett, Sec. 59½, Blk. 8, H.&G.N. Sur. S.D. 30 ft.
Thomason Prod. Co. No. 1 Notions, Sec. 1, Blk. 105, W. P. Howard Sur. S.D.; csg. 960 ft.
S. Thompson No. 1 Elsinore Cattle Co. Sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. csg. 6,903 ft.

Reagan County

John W. Emch No. 1 T.&P. Ld. Trust, Sec. 203, Blk. 1, T.&P. Sur. S.D.O. 2,756 ft.

Reeves County

Ohio Oil Co. No. 1 Papham, Sec. 18, Blk. 54, T.&P. Sur. Drlg. 5,585 ft.

Schleicher County

Lone Star Gas Co. No. 1 Bert Page, Sec. 30, Blk. L, G.H.&S.A. Sur. R.U.S.T.
Lone Star Gasoline Co. No. 2 Bert Page, Sec. 46, Blk. L, G.H.&S.A. Sur. Drlg. wtr. well.

Scurry County

Coffield & Guthrie No. 1 First Natl., Bk., Snyder, Sec. 29, Blk. 97, H.&T.C. Sur. M.I.M.
Coffield & Guthrie No. 1 E. E. Spears et al, Sec. 130, Blk. 97, H.&T.C. Sur. Tstg. 2,366 ft.; P.B. depth.

Sterling County

J. W. Sward No. 1 Brennand, Sec. 107, Blk. 2, H.&T.C. Sur. D.&A. 3,011 ft.

Tom Green County

Spinner No. 1 Reed, Mason Ferry Ranch Sur. W.O.C.; cave 4,948 ft.

Upton County

White & Wilson No. 1 Webb, Sec. 176, Blk. 1, C.C.S.D.&R.G.N.G. Sur. Drlg. 500 ft.

Val Verde County

A. W. Little No. 1 R. W. Sellers, Sec. 34, H.&G.N.R.R. Sur.; 1,500-ft. test. S.D.O. 1,590 ft.

Ward County

Edwards & Donnelly No. 1 J. S. Reynolds, Sec. 34, Blk. 1, H.&T.C. Sur. R.U.M.
Herschel M. Jaffe No. 1 Viola Meyers, Sec. 17, Blk. 32, H.&T.C. Sur. D.&A. 2,539 ft.
Robt E. Mitchell No. 1 Allen, Sec. 7, Blk. 32, H.&T.C. Sur. Drlg. 1,310 ft.

Winkler County

S. W. Richardson No. 1-A J. M. Broshara, Sec. 22, Blk. 77, P.S.L. Sur. Tstg. 4,019 ft.

Yoakum County

J. E. Mabee No. 1 N. W. Willard, Sec. 741. Tstg. 5,227 ft.
Shell Pet. Corp. No. 1 J. M. Rutts, Sec 743. Flwd. 2 B.P.H., 2% oil; tstg. on pump 5,256 ft.

WEST CENTRAL TEXAS DISTRICT

Brown County

H. P. Evans No. 1 C. M. Kilgore, Robt. Mitchell Sur. No. 141. Drlg. 1,136 ft.
Evans No. 1 J. F. Davis, S. Tull Sur. No. 894. Spd. and S.D.

Callahan County

Dobbs Oil Co. No. 1 Finley, Sec. 75, Bayland Orphans Home Ld. Sdtrkg. tools 1,785 ft.
J. C. Jackson et al No. 1 T. J. Thompson, Sec. 30, B.B.B.&C. Sur. T.D. 1,690 ft.; U.R.

Coleman County

Arcadia Ref. Co. No. 1 W. R. Roberts, D. J. Holt Sur. Fsg. 2,685 ft.
Lynn & Jordan No. 1 Eades, J. West Sur., 7 mi. SW of Santa Anna. S.D. 415 ft.

Comanche County

Comanche O. & G. Co. No. 1 J. E. McGuire, C. Rockefeller Sur. No. 3. Drlg. 2,500 ft.
Loraine No. 1 Carlisle, Sec. 9, Blk. 2, H.&T.C. Sur. M.I.M.

Eastland County

J. F. Baker No. 3 N. T. Mulloy, Wm. Ahrenbeck Sur., Abst. 700. P.B. to Caddo L.
Dobbs Oil Co. No. 1 Greer, J. E. Hardy Sur., Ellenburger test. S.D. 1,738 ft.
Hickok P. & D. Co. No. 1 Penn, Sec. 468, S.P. Sur. Drlg. 3,839 ft.

Erath County

Wayne Chandler No. 1 Chandler, J. W. Moore Sur., Abst. 571. W.O.C. 2,818 ft.
Collard No. 1 W. L. Payton, H. Pierson Sur. No. 1, Abst. 1105. S.D. 185 ft.

Hamilton County

Wallace & Vickers No. 1 C. C. Lund, J. P. Bailey Sur. 51. Drlg. 1,705 ft.

Haskell County

Roeser & Pendleton and I.T.I.O. No. 1 M. O. Daugherty, Sec. 19, Wise C.S.L. Sur. S.D.O. 4,700 ft.
Sawyer Drlg. Co. No. 1 A. J. Rowland Est., Sec. 5, Blk. 3, H.&T.C. Sur., 15 mi. E of Stamford. S.D. 4,890 ft.

Jones County

Brown Eagle Oil Co. No. 1 Haynes, Sec. 191, Lemuel Andrews Sur. S.D.O. in sd. 2,283 ft.
Brown Eagle No. 1 Waterson, Andrews Sur. No. 191, T.D. 2,283 ft.; S.D.
S. C. Herring No. 1 B. L. Ellis, 330 ft. fr. N and E lines, SE¼ Sec. 8-15, T. &P. Sur. Loc.
S. B. Roberts Co. No. 1 Roy E. Prichard, 205 ft. fr. SL, 2,428 fr. EL, J. E. Cockrell Subd. 2, G. Martinez Sur. 195, Loc.
Stiles et al No. 1 Cook, Sec. 89, B.B.B. &C. Sur., western part of county. Drlg. 4,025 ft.

Nolan County

Chas. E. Peddicord No. 1 Tipton, Sec. 43, Blk. 19, T.&P. Sur. S.D.O. 2,827 ft.
Union Oil Co. No. 1 J. D. Pepper, Sec. 51, Blk. 21, T.&P. Sur.; 5,000-ft. test. 6 mi. SW Sweetwater. Drlg. 3,100 ft.

Parker County

Glen Rose No. 1 H. D. Groves, SW¼ Sec. 350, T.&P. Sur. S.D.; T.D. 685 ft.

Shackelford County

Joe DeGrazier No. 1 Harbough, E cen. part of county, Sec. 1563, T.E.&L. Sur. 4,500-ft. test. S.D. 3,894 ft.
R. H. Gordon and Frank Pethybridge No. 1 C. B. Snyder, 330 ft. fr. N and E lines, Sec. 38, L.A.L. Sur.; 4,500-ft. test. Est. 20 to 50 B.O.P.D.; T.D. 3,660 ft.; S.D. 4,293 ft.

TEXAS PANHANDLE

Collingsworth County

Tinsley, White & Knoll No. 1 Frank Knoll, Sec. 62, Blk. 16, H.&G.N. Sur. C.&P.
White No. 1 Wischamper. S.D. 2,263 ft.
Johnson No. 1 Taylor. S.D. 875 ft.

Deaf Smith County

Uscan No. 1 Farwell. Tstg. 5,650 ft.

Donley County

Robinson No. 1 Kuteman, Sec. 88, Blk. 20, H.&G.N. Sur. U.R. 3,754 ft.

Gray County

English No. 1 Eudy, S.D. 3,977 ft.
Tripplehorn No. 2 Webb, Sec. 12, Blk. A-9, H.&G.N. Sur. R.U.S.T.

Kent County

E. Dolman et al No. 1 C. V. O'Keefe, Sec. 50, Blk. 1, 15½-in. csg. set at 140 ft.; drlg. at 180 ft. last report.

Lipscomb County

M. C. Tieman No. 1 Spangle, Sec. 626, Blk. 43, H.&T.C. Sur. S.D. 1,880 ft.

Potter County

Sinclair Prairie Oil Co. No. 1 Bush, Sec. 23, Blk. 6, B.S.&F. Sur., about 3 mi. N of Amarillo; 8,500-ft. test. Drlg. 5,380 ft.

Roberts County

Whitlock No. 1 Cunningham. S.D. 2,817 ft.

E. C. TEXAS WILDCATS

Cherokee County

J. R. Bunn No. 1 S. W. Lang, Levi Jordan Sur., 7 mi. S of Rusk. Drlg. 1,001 ft.
C. C. Lanier No. 1 A. T. O'Neal, J. M. Procella Sur., 3 mi. E of Troup. Loc.

Collins County

G. L. Pace Pet. Co. No. 1 E. E. Hooper, J. Rutherford Sur., 2 mi. E of Blue Ridge. S.D. 1,168 ft.

Falls County

W. H. Mahon No. 1 V. H. Moore, N. K. Robinson Sur., between Lott and Rosebud. S.D.O. 315 ft.

Grayson County

Jim McMurrey No. 1 Dr. T. J. Long, J. Garland Sur., 2 mi. S of Collinsville; 4,000-ft. test. S.D.O. 3,929 ft.

Henderson County

Tide Water-Seaboard-Humble No. 1 Sadie Starr McGee, R. Acosta Sur., 3½ mi. NE of Murchinson. W.O.C. 5,255 ft.

Houston County

John G. Mayo No. 1 E. C. Lively, S. Rogers Sur., 4 mi. NE of Grapeland. Cg. 5,871 ft.
Wynne Drlg. Co. No. 1 May Price, T. Strother Sur., 4 mi. W of Grapeland. S.D. 500 ft.

Kaufman County

Sam Knoerr No. 1 J. B. Hunter, P. Walker Sur., 5 mi. S of Terrell. Drlg.
W. S. McGee No. 1 Pritchett, J. Hendricks Sur., 7 mi. W of Mabank. S.D. 3,104 ft.

Lamar County

Dahl Bros. & Barr No. 2 McQuiston, R. Russell Sur., ½ mi. N of Paris. S.D. 30 ft.

McLennan County

C. E. Porter No. 1 B. D. Burchett, De la Vega Sur., just SE Waco. S.D. 695 ft.

Rains County

McKinley & Hastings No. 1 McTaggert, B. Milder Sur., 1 mi. W of Emory. S.D. 30 ft.

Red River County

Bentley-Sheppard & Stevens No. 1 So. Pine Lbr. Co., G. S. Parks Sur., 17 mi. N of Clarksville. S.D. 71 ft.

Smith County

J. H. Thomason No. 1 J. W. Bartlett, R. H. Stewart Sur., ½ mi. SE of Jamestown. S.D.O. 1,802 ft.

Trinity County

C. D. Davis No. 1 J. D. Gibson, A. Donavan Sur., 4 mi. NE of Trinity. Gas blowout 148 ft.; W.O.C. 232 ft.

Van Zandt County

W. S. King No. 1 Edna W. Watson, M. G. Whitaker Sur., 5 mi. S of Grand Saline. D.&A. 2,600 ft.

NORTH TEXAS WILDCATS

Archer County

L Sikes No. 1 Walter Ford, T. M. Cecil Sur. A-982. T.D. 4,204 ft.; O.W.D.D. to 5,500 ft.; R.U.R.
Sinclair Prairie No. 1 J. A. Hood, Blk. 18, A.T.N.C.L. Sur. 6⅝-in. cmtd. 4,954 ft.; T.D. 5,180 ft.; P.B. 4,976 ft.; W.O.C.
Thurmond & Lipscomb No. 2 L. F. Wilson, E. Hall Sur. A-682. 6⅝-in. 4,235 ft.; S.S.O. 4,235-46 ft.; tstg., est. 35 B. P.H.
Westmount Oil Co. No. 7 T. J. Dempsey, Sec. 10, D.C.S.L. Sur., O.W.D.D. Perf. csg. 4,139-44 ft.; blg. wtr. and tstg.

Baylor County

British American Oil Prod. Co. No. 1 F. C. Green, T.&N.O. Sur., Sec. 215. Drlg. 1,470 ft.

Clay County

Walter Gant No. 1 Bryant Edwards, S. C. Beldon Sur. A-12; 6,000-ft. test. 6⅝-in. 5,990 ft.; S.L. 5,994-6,016 ft.; T.D. 6,354 ft.; P.B. 6,089 ft. and shot. csg.; treating; acd. 5,794-5,839 ft. through perfs.

Cooke County

H. W. Caudle No. 1 E. E. Walker, H. Gilman Sur. Loc.; 5,500-ft. test.
Denver P. & R. Co. No. 1 D. B. Allred, De Los Santos Sur. A-894. Fsg. 4,582 ft.
L. C. Heydrick No. 1 F. J. Franklin et al, L. Raney Sur. A-878. S.D.O. 2,501 ft.
Sinclair Prairie No. 2 J. M. Best, T. Toby Sur. A-1054. B.O.S. 4,909-20 ft.; S.D.O.

Foard County

Fleetwood & Kaufman No. 1 Prowers, H.&T.C. Sur., Blk. A. R.U.R.

Grayson County

O. L. McDougal No. 1 Jackson, H. Coffee Sur., Abst. 204; 4,000-ft. test. S.D. 562 ft.
J. H. McMurray No. 1 T. J. Long, Jas. Garland Sur. A-441. Drlg. 3,929 ft.
C. E. Marshall No. 1 F. Christman, M. Ahalt Sur. A-1427. Drlg. 610 ft.

Jack County

H. R. Lippitt No. 1 S. Franklin, H. Ferguson Sur. A-215. Drlg. 2,365 ft.
Marion Church No. 1 S. E. McClure, Sec. 2669, T.E.&L. Sur. S.D.O. 1,970 ft.
Noah Daves No. 1 K. D. Baker, Sec. 2709, T.E.L. Sur.; 4,000-ft. test. Recmt. 10-in. at 90 ft.; S.D.O. 2,320 ft.
Southern O. & G. Co. No. 1 A. Eason, A. D. Kennard Sur. A-328. Drlg. 3,768 ft.
Texas Crusaders Oil Co. No. 1 M. L. Pigg, D. A. Norton Sur. A-1151. Drlg. 198 ft.

Montague County

Lobban et al No. 1 Henry Payne, Wm. Donoho Sur. A-178. Drlg. 320 ft.
H. H. Powell No. 1 Arch Durhan, W. J. Wagoner Sur. A-936. S.D.O. 1,800 ft.
Sinclair Prairie No. 1 Hill, Blk. 71, L. C.S.L. Sur. Drlg. 2,326 ft.
Youngblood & Foree No. 1 J. A. Burnett, J. Lenow Sur. A-433. 6⅝-in. 4,139 ft.; S.S.O. 4,139-45 ft.; test S.W.&S.O.; S.D.O.

Wichita County

F. S. Freeland No. 1 J. D. Cooper, H. Hastie A-92; 4,000-ft. test. Spd. and S.D.

Wise County

H. Jackson No. 1 F. Neeley, Blk. 29, Matagorda Co. Sch. Ld. Spd. and S.D.
H. M. Muse No. 1 F. F. Kaker, Blk. 16, Matagorda Co. Sch. Lds. Pits.

Wilbarger County

Phillips Pet. Co. No. 1 H. C. Shive, Sec. 79, H.&T.C. Sur., Blk. 14. Sat. L. 3,251-62 ft.; S.O.; S.D.O. 3,750 ft.

Young County

Bryson O. & G. Co. No. 1 J. M. Nall, Sec. 1997, T.E.&L. Sur. Loc.
Horwitz & Oldom No. 1 C. J. Taach B. Sec. 248, T.E.&L. Sur. 6⅝-in. 4,113 ft.; T.D. 5,090 ft.; P.B. 4,160 ft. to test G.L. 4,136-60 ft.
Italio Pet. Corp. No. 1 H. M. Donnell, Sec. 4, S.P.R.R. Sur. S.D. 3,395 ft.
Long & Lupton No. 1 A. Crouch, I.&G. N. Sur. A-1460. Fsg. 2,555 ft.
Pitzer-West No. 1 Robt. Bulloch, J. P. Hume Sur., Abst. 140. Drlg. 2,760.

Canadian Fields

(Continued from Page 92)

crude. The test got the Devonian limestone at 258 feet. After deepening a little, a production test may be made. The well is sponsored jointly by the Canadian Western Natural Gas Co. and Canyon Oils, Ltd.

Del Bonita Producer

On the Del Bonita structure, south of Lethbridge, Terminal Oil Co. No. 1 has developed a flowing production of 30 bbls. of light crude, following gun perforation and acidizing of the lower 10 feet of oil sand. The well, drilled some years ago by the S. Myron Zandmer interests, was carried through several sands into the water level of the Madison lime. The water was not shut off at the time, but recently a new liner was installed and water, oil and gas cemented off. When the 10-foot lower sand was perforated and acidized, crude rose 3,000 feet in the hole. A start was made perforating the upper 35 feet, but trouble developed with the equipment, and a new outfit is being awaited. When this arrives, the upper sand and a gas sand will both be perforated and acidized, and a definite production test made. The oil is 35 gravity crude and free from water.

NORTH TEXAS COMPLETIONS

Archer County

Cochran & Cain No. 1 S. B. Herron, 891 feet, dry. N. H. Martin No. 1 J. Stehlik, 2,610-26 feet, 100 bbls. Rathke Oil Co. No. 1 Cullum & Jones, 729 feet, dry. Shappell Oil Co. No. 50 J. L. Jackson, 2,609-21 feet, 500 bbls. Texas Co. No. 34 L. F. Wilson A, 4,375-4,428 feet, 125 bbls.

Clay County

H. Bowers No. 6 C. J. Shumake, 1,119-58 feet, 250 bbls. N. H. Martin No. 1 C. J. Shumake, 1,406 feet, dry. Metzner & Burns No. 12 Thornberry A, abandoned location. F. Payne No. 1 W. A. Henderson, 1,308 feet, dry.

Jack County

Conner et al No. 1 Stinehouse, abandoned location. Hanlon-Buchanan, Inc. No. 1 J. B. Jackson, 1,510 feet, dry; No. 1-A Ed Myers, 400 feet, dry. J. B. Sneed & Co. No. 6 J. M. Bloodworth, 321-40 feet, 10 bbls.

Wichita County

J. C. Clower No. 20 George L. Dobie, 348-64 feet, 8 bbls. Humble Oil & Refining Co. No. 32 W. H. Taylor, 3,833-3,901 feet, 600 bbls. King Oil Co. and others No. 3 Pettit State Lands, 3,867-3,914 feet, 975 bbls. Shappell Oil Co. No. 51 J. L. Jackson, 2,625-30 feet, 500 bbls. Shell Petroleum Corp. and others No. 1 D. R. Preston, 3,823-3,921 feet, 250 bbls. C. H. Staley and others No. 8 Mrs. Anna Mangold, 3,771-3,885 feet, 688 bbls. Sunray Oil Co. No. 2 A. W. Burnside, 3,814-3,933 feet, 600 bbls.

Young County

Imperial Petroleum Co. No. 1 C. N. McCluskey, 2,645 feet, dry. Reischman Camp & Kelly No. 1 L. L. Davidson, 3,826 feet, 400 bbls. Regal Oil Co. No. 1 H. Koester, 1,101 feet, dry. Seiboldt Drilling Co. No. 1 E. M. Wolf, 3,911-65 feet, 12 bbls.

Personal Paragraphs

BYRON RUSSELL, district salesman with the Arkansas Fuel Oil Company, has resigned his position to become general manager of the Consolidated Oil Company in Houston, Tex.

BURDETTE BLUE, Bartlesville, Okla., president of the Indian Territory Illuminating Oil Company, will address the Kansas Independent Oil and Gas Association at its first annual dinner meeting Friday evening, December 16, at the Allis Hotel in Wichita. H. A. MEYER is managing director of the association. ROLLA A. CLYMER, Eldorado, editor of the Eldorado (Kans.) Times, will also be a speaker.

ROY L. CRAWFORD, independent oil operator of Fort Worth, Tex., has opened offices in Evansville, Ind., preparatory to entering the oil play in Illinois.

M. R. McARTHUR, district production superintendent for the Phillips Petroleum Co., has been transferred from Corpus Christi to Houston, Tex., where the company recently established district production offices.

J. C. HUNTER, president of the West Central Texas Oil and Gas Association, is in charge of arrangements for a wild-game dinner to be held for the organization in the Automobile Building at the West Texas Fair Grounds, Abilene, Saturday evening, December 10. Deer and elk steaks will be served, and 1,500 oil men are expected.

WILLIAM G. FRANKE, American-Mexican Petroleum Corporation, was elected president of the Chicago Oil Men's Club at its annual business meeting last Thursday, succeeding CHARLES P. HIRTH, Hughes Tool Company. HARRY LIGHSTONE, Kanotex Refining Company, was elected vice president; CHARLES J. WOOD, Harry P. Dunn Company, secretary; CARL H. SAAS, Refiners Petroleum Company, treasurer.

W. C. KNIEFEL, assistant manager of the Huron, S. D., sales division of Standard Oil Company of Indiana, has been transferred to assistant manager (reseller) at Milwaukee, Wis., to succeed H. E. Radasch, who died last month. E. F. CRITCHETT, motor oil sales promoter in the Chicago general offices, has returned to the position he formerly held of assistant manager at Huron to succeed Mr. Kniefel. Mr. Kniefel joined the company in 1925 as a service station attendant in Minneapolis, Minn.

HENRY H. WILLIAMS, long-time oil man and for 26 years an employe of the Standard Oil Company of California, has retired from active service. He went to work for the Ohio Oil Company in 1898. Five years later he was sent to Rumania by the Standard Oil Company of New York, to introduce cable tool drilling. In 1908 he was sent by the Imperial Oil Company to Peru, South America, where he remained until 1911. Then he went to Coalinga, Calif., for the Canadian Coalinga Oil Company. In 1912 he was employed by the Standard Oil Company of California as a driller. Promotions carried him to assistant production superintendent for northern California. With his wife and three children, he will reside in Santa Cruz, Calif.

WALTER P. WRENN, who operates a service station in Goldsboro, N. C., found a purse containing $70 and handed it to a woman in an automobile who said she had dropped it and who thanked him smilingly. The man with her handed a nickel to Mr. Wrenn, with, "Buy yourself a drink. I've found an honest man." After the two had driven from the station Mr. Wrenn asked an attendant if the man had paid for having his battery serviced. "No, he said he had paid you."

E. P. HAYES, chief engineer, South Texas Division of the Texas Company, was chosen chairman; PAUL HUBBARD, assistant production manager, Gulf Oil Corporation, first vice chairman; J. U. TEAGUE, chief engineer, Gulf Coast division of the Humble Oil & Refining Company, second vice chairman, and WARREN BAKER, secretary-treasurer, of the Houston chapter, American Petroleum Institute, Division of Production, at its annual election of officers last week. Mr. Hayes succeeds D. B. COLLINS, manager of the production department of Shell Petroleum Corporation. New members of the advisory board are PAUL GUARIN, Shell Petroleum Corporation; HARRY L. EDWARDS, drilling contractor; TOM PEW, General Crude Oil Company; D. E. LEGAN, Tide Water Associated Oil Company; FRED WALTERMIRE, Continental Oil Company, and R. L. CARRUTHERS, Sun Oil Company (Beaumont).

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The deep test for oil or gas in the Bradford field in Pennsylvania has been drilling since August, 1912, and has reached only 5,650 feet. The test is well financed and in capable hands, but very hard limestone formations have made progress slow in the past couple of months.

Production in Oklahoma is increasing so rapidly it has taxed the three pipe lines, Prairie, Gulf, and Texas, to handle it.

20 YEARS AGO

A country church near Ranger, Tex., has been made wealthy by oil royalties and the congregation is wondering whether the wealth belongs to the members or to the church as an institution. They are still debating it.

The income of the Osage tribe of Indians in the fiscal year ending June 30, 1918, was approximately $8,000,000, mostly from oil and gas royalties and bonuses.

10 YEARS AGO

The Indian Territory Illuminating Oil Company's wildcat, which opened a pool on the outskirts of Oklahoma City this month, is flowing 4,800 barrels per day of 40-gravity oil. It is in C SE SE Section 24-11-3w. Geologists are arguing over the question of the source of the oil.

The recently opened Valley Center pool near Wichita, Kans., may be another Eldorado, optimistic oil men believe. It is 30 miles west of the big Eldorado pool in Butler County.

The world's deepest oil well, in the Big Lake, Texas, field is over 8,520 feet in depth and produces 676 barrels per day of 53-gravity crude with a 67.50 per cent gasoline content. It is owned by the Texon Oil & Land Company.

A well in the Jal area in Lea County, New Mexico, produces 80,000,000 feet of gas per day. It is Texas Production Company No. 1 Cagle.

Texas Company is building the longest electric welded pipe line in existence from Lefors, in Gray County, to Electra, in Wichita County, Texas. It is 155 miles of 8-inch pipe.

H. HUISMAN, of the Royal Dutch-Shell interests, with offices in Amsterdam, Holland, arrived in California this week.

WALTER HOLMES, independent producer of Amarillo, Tex., has received notice from the game commissioner at Juneau, Alaska, that an Alaskan white sheep Mr. Holmes had bagged on a hunting trip near Fairbanks in September, 1937, was the prize sheep of the year 1937-38.

LEE A. POTTER, formerly vice president of the Barnsdall Refining Corporation, in charge of industrial sales, is now president and a director of Forman, Ford & Company, paint manufacturers, Minneapolis, Minn. Mr. Potter joined the company on its recent management and financial setup reorganization.

G. C. DUNN, appointed receiver in 1932 for the interest holders in the T. H. P. Duncan lease, a valuable 20-acre oil tract in Gregg County, Texas, resigned that post last week. Judge Dick Dixon said he would appoint a new receiver within a few days, adding: "I invite no suggestions in the appointment of receivers and I warn all interested parties that the court will be firm and a little ugly at any approach or suggestions regarding who should be appointed."

GEORGE H. NORTON, district geologist for the Atlantic Refining Company in Wichita, Kans., was director of the Petro Paleo Players, who on Tuesday evening of this week presented a comedy, "Submid-continental Geo-Follies of 1938," at the Allis Hotel, in Wichita. The play featured the annual business meeting and dinner frolic of the Kansas Geological Society. E. O. KOESTER, district geologist for the Darby Petroleum Corporation in Kansas, is president of the society.

Personal Paragraphs

J. W. HORNBROOK, of Bartlesville, Okla., has entered the service of the Peruvian government and will supervise geophysical work and exploratory drilling in Peru.

JACK KADANE, Wichita Falls, Tex., oil operator with wide holdings in the K.M.A. field, and MISS ISOBEL ANDREWS, Los Angeles, were recently married in the latter city. They will reside in Wichita Falls.

L. P. ST. CLAIR, chairman of the board of the Union Oil Company of California, has left Los Angeles for the Sun Shipbuilding plant to be present at the launching of Union's new tanker. The boat will be named the L. P. St. Clair and be registered under American colors.

MICHAEL C. CHERVENAK, elected to the Pennsylvania House of Representatives from Cambria County, was named the new chairman of the oil investigating commission. His selection by SPEAKER ROY FURMAN followed the action of the legislature in passing a bill providing that all members of the commission shall be members of the legislature. Mr. Chervenak takes the place of JUDGE RALPH H. SMITH, of Pittsburgh.

W. W. TONEY, well known among independent operators in various oil fields, has returned to Montana, where he has purchased oil leases in the West Kevin field. Associated with him is J. H. WAKEFIELD, of Seattle, Wash. The two will develop their new properties, which are in proven territory. Mr. Toney, who left Montana nine years ago, blocked up leases in the Shelby gas field and got the Ohio Oil Company interested in their development. The field now supplies Shelby and all the towns on its lines between Shelby and Great Falls.

Active in Conservation

Roy P. McLaughlin, general manager of the Dominguez Oil Fields Company, with offices in Los Angeles, is one of the men who were instrumental in having California's oil conservation statutes framed and in establishing the administrative department for their enforcement. He was a pioneer too, along with Philip Jones, in the use of the gas-lift in California. After graduating in 1902 from Stanford University, where he had majored in engineering, Mr. McLaughlin was employed as an engineer by various mining companies in Nevada and California. In 1908 he joined the Associated Oil Company as a geologist. He was made state oil and gas supervisor in 1915. After five years in that post he resigned to open an office of his own as a consultant. In 1934 he gave up private practice to take the position of general manager of the Burnham Exploration Company, which later became the Dominguez Oil Fields Company.

R. P. McLAUGHLIN

Mr. McLaughlin has written much on engineering and geological subjects, including magazine articles, bulletins, and books. One of his best-known productions is "Land Development and Valuation." He is a member of the American Institute of Mining and Metallurgical Engineers; American Association of Petroleum Geologists; the California Club, in Los Angeles, and Sigma Xi fraternity. He was born in Fairplay, Colo., in 1879; married Helen M. Kitts in 1909, and they have three children.

R. H. McLEMORE, petroleum engineer for Sun Oil Company, is now in the company's Dallas, Tex., offices having been transferred from Beeville, Tex.

DAVID DIMITT, an Oklahoma driller in the early days of the rotary and now with the Tropical Oil Company at El Centro, Colombia, has returned to South America after several weeks' leave of absence, most of which was spent at Kaw City, Okla.

C. C. SPICER, president of the Republic Petroleum Corporation and president of the Los Angeles Shipbuilding & Drydock Corporation, has returned to his Los Angeles office following a month's trip to Washington where he attended conferences with members of the U. S. Maritime Commission concerning the future of shipbuilding activities on the Pacific Coast.

G. E. SADLER, incoming member of the Texas Railroad Commission, was guest of honor at a dinner and reception at the St. Anthony Hotel, San Antonio, Tex., Tuesday evening of this week. LON SMITH, a member of the commission, and COL. E. O. THOMPSON, its chairman, were among those invited. STATE SENATOR J. FRANKLIN SPEARS was head of the committee in charge of arrangements.

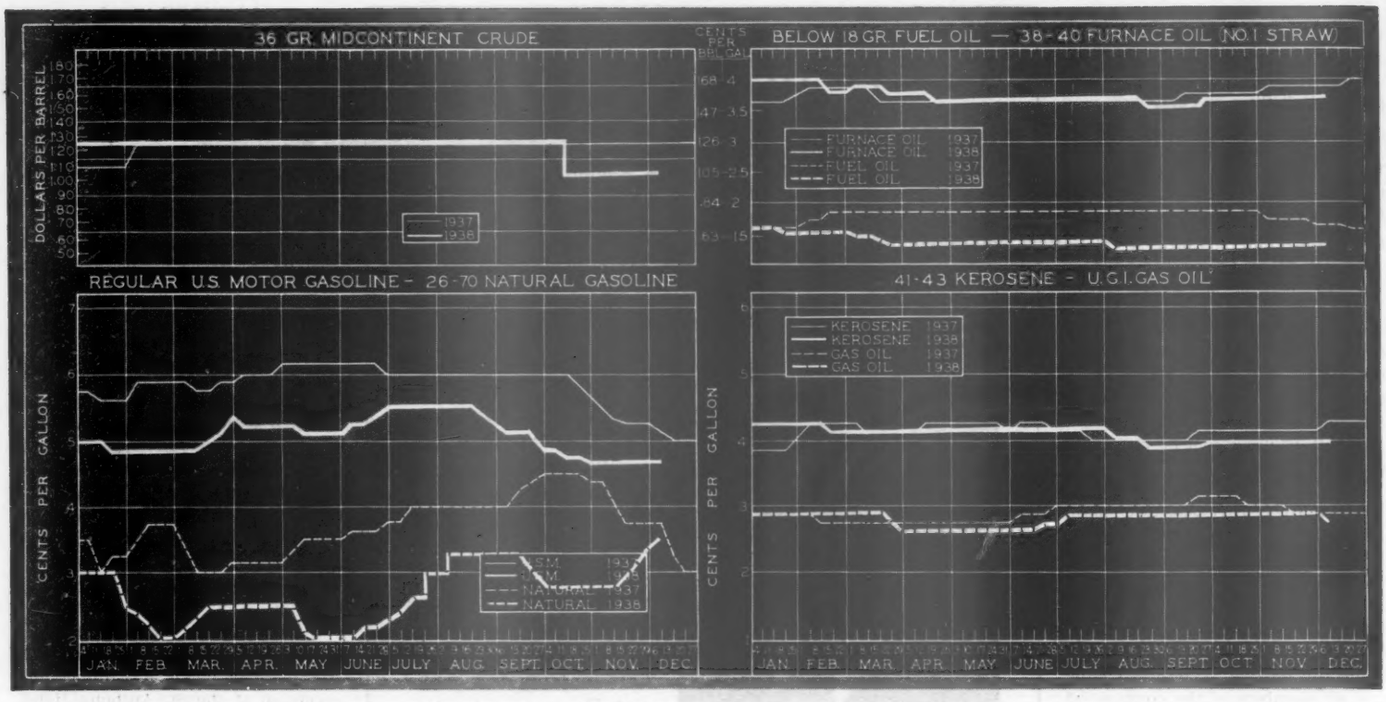
CAPT. J. F. LUCEY, president of the Lucey Petroleum Company, Dallas, Tex., has been appointed a member of the advisory board being formed by W. LEE O'DANIEL, governor-elect of Texas. Captain Lucey was desired by the incoming governor on his board of advisors to represent the independent oil men of the state. Thirty-four persons have been invited to membership on the board and all but four have accepted.

ALFRED F. SMISSEN, of the French Development Corporation, Oklahoma City, Okla., was in Mexico City recently, accompanied by former GOVERNOR WILLIAM H. MURRAY, of Oklahoma. They conferred with VICENTE CORTES HERRERA and other Mexican government oil officials. Mr. Smissen is planning to return to Mexico City next week.

THOMAS MIDGLEY, JR., Worthington, Ohio, famous for his achievements in applied chemistry, including the development of antiknock motor fuels and safe refrigerants, is one of five members of the staff of the Ethyl Gasoline Corporation who have been awarded emblems in recognition of 15 years of service. The Ethyl Corporation was founded in 1924 to manufacture and distribute Ethyl fluid, discovered by Mr. Midgeley, now vice president of the company and chairman of the board of directors of the American Chemical Society.

SHIFTS: R. R. JAMES, independent producer, from Hotel Du Croissant Rue Gambetta, Tours Indre-et-Loire, France, to Hotel Plaza, Corpus Christi, Tex.; C. M. McCUTCHEON, independent producer, from Houston, Tex., to El Dorado, Ark.; F. K. SPRAGINS, engineer, Carter Oil Company, from Huntington, Ind., to Harrisburg, Ill.; A. B. BARROW, engineer, Superior Oil Company, from Mount Vernon, Ill., to Evansville, Ind.; C. L. JORDAN, owner, C. L. Jordan Oil Producing Company, from Bristow, Okla., to Mattoon, Ill.; A. C. PAGE, JR., engineer, Socony-Vacuum Oil Company, from Augusta, Kans., to Tulsa; H. F. GIBSON, Gibson & Jennings, Inc., from Dallas, Tex., to Mount Vernon, Ill.; FRANK R. YOUNG, engineer, Richmond Oil Company, from Yonkers, N. Y., to Albion, Ill.; BEN BANNER, drilling contractor, from Fort Worth, Tex., to Oklahoma City, Okla.; MITCHELL TUCKER, engineer, Geological Scientific Service Company, from Fort Worth, Tex., to Tulsa; E. F. KELSO, lease foreman, Phillips Petroleum Company, from Iraan, Tex., to Bartlesville, Okla.; WILLIAM L. RUSSELL, geologist, Michigan Devonian Petroleum Company, from Owensboro, Ky., to Capetown, Union of South Africa.

J. H. DUNN, chief production engineer for the Lone Star Gas Company, resigned December 1 to become general manager of the Shamrock Oil & Gas Corporation, with headquarters in Amarillo, Tex. L. T. POTTER, assistant production engineer for Lone Star, has been appointed to succeed Mr. Dunn in charge of Lone Star's production engineering department. Mr. Potter joined Lone Star in 1928, following his graduation from Texas A. & M. College, where he received his degree in mechanical engineering. Mr. Dunn had been with Lone Star since 1926, when he entered the gas measurement department, six months after his graduation from the same college.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1937
1938
BELOW 18 GR. FUEL OIL — 38-40 FURNACE OIL NO. 1 STRAW
CENTS PER BBL. GAL.
FURNACE OIL 1937
FURNACE OIL 1938
FUEL OIL 1937
FUEL OIL 1938
REGULAR U.S. MOTOR GASOLINE - 26-70 NATURAL GASOLINE
CENTS PER GALLON
NATURAL 1937
NATURAL 1938
41-43 KEROSENE - U.G.I. GAS OIL
KEROSENE 1937
KEROSENE 1938
GAS OIL 1937
GAS OIL 1938
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Natural Gasoline Presents Only Signs of Life Visible in Group 3 Market

By T. F. SMILEY

The refinery market in the Group 3 area presented an uninspiring scene this week. Natural gasoline, clambering to a new high for the year, was the only product that showed signs of real life. Motor fuel offered no promise of crawling out of the cellar. Heating oils were exhibiting belated symptoms of activity. The heavy industrial fuels were moving gradually into a better position.

Notwithstanding gasoline shipments continue at a surprisingly high level, with stocks well below the point recorded last year, tankcar prices remain absurdly low, removing any chance for most refiners to garner a bit of profit. That losses are not confined to refiners who must buy their crude is illustrated by the latest financial statement of the Derby Oil & Refining Corp., Wichita, Kans., which shows a net loss of $112,924 for the first nine months of 1938, compared with a net profit of $435,337 in the same period of 1937.

Various Conditions Blamed

Unprofitable operations in the face of a favorable statistical situation are ascribed to various conditions. One is that some refiners are so situated as to obtain crude at exceptional prices, which enables them to make a little profit even at the prevailing low plane of tankcar quotations. Some, for instance, can get cheap Louisiana crude. Others are said to be buying Illinois and Indiana crudes at less than posted prices. Such refiners can undersell those not thus advantageously placed, exerting a weakening influence on the whole market.

Another factor of unquestionable weight is the uneasiness left in the trade by the Madison trials. Refinery sales executives are afraid to get together and talk things over with a view of correcting ruinously disjointed market conditions. Just how the refining branch of the industry is to pull itself out of the mire is anybody's guess, observers say. There is widening feeling that gasoline stocks will drop to a level in gear with requirements before next year's heavy consuming season opens and that with refining operations on a sound basis again, the price muddle will take care of itself. In the meantime those integrated companies whose crude production exceeds their own refinery requirements are, generally speaking, best able to fight their way through to better times. Refiners who must buy Mid-Continent crude at posted prices face a discouraging prospect.

Brisk refinery buying, along with active export business, lifted both Oklahoma and Texas natural gasoline quotations to new highs for the year. Moderate jobber demand was a help. Most of the orders have been from Oklahoma and northern markets, though Gulf Coast purchases have been rising also. Several part cargoes for export are booked for December loading, and there is an inquiry in the market for a full cargo for coastwise shipments. Material in Oklahoma was reported to be scarce at even the higher prices.

Reports on Heating Oils Vary

Reports regarding the light fuels lacked uniformity, though those of optimistic color preponderated. Some refiners said the strongest demand was for range oil and No. 1 prime white. Others said the calls for No. 2 and No. 3 grades were the most insistent. A few declared they could detect little change from the slowness which has marked this division of the market for weeks. The cold wave in northern areas which recently imparted a little life to the furnace distillates subsided quickly, leaving the owners of unwieldy heating-oil stocks waiting as before for temperatures which would touch a match to more oil burners.

If there was any change in the outlook for bright stocks and neutrals it was hard to see. Stocks were still far too heavy, but it was suggested that underselling might have decreased slightly. Wax was vigorous at current quotations.

Refined Oil Market Barometer

Demand for motor fuel slowing up while that for heating oils rises, under the influence of colder weather. All the light burning oils show a firmer tone. Natural gasoline vigorous, with offerings increasingly scarce and prices up. Heavy fuel oil gaining, with concessions from ruling prices no longer easy to get. Lubricants soft. Wax strong at prevailing levels.

MID-CONTINENT. Gasoline unsteady. Naturals buoyant. Heating oils somewhat firmer.

EAST COAST. Gasoline slower. Light fuels stronger. Industrial fuel oil much stronger.

GULF COAST. Gasoline plentiful, movement slack. Both light and heavy fuels in demand.

CALIFORNIA. General spot market inactive, softening. Diesel and gas oils weak.

PENNSYLVANIA. Gasoline soft. Kerosene and light fuels lack firmness. Lubricants off.

CHICAGO. Gasoline quiet. Heating oils improving. Heavy fuels displaying steadier tone.

Fuel Oil and Gasoline Markets in East Follow Season Trend

By H. STANLEY NORMAN

NEW YORK, Dec. 5.—In keeping with the season New York fuel oil prices ascended and gasoline prices declined. The gasoline prices in New Jersey, western and upper New York were off from ¼ to ½ cent per gallon with the reductions concentrated in the New York Harbor district. Heavy and light fuel oil were advanced from ⅛ to ¼ cent per gallon in both the New York and primary markets. Socony-Vacuum Oil Corp., Inc., reduced gasoline prices throughout the eastern part of New York and New England ½ cent per gallon. Standard Oil Co. of New Jersey lowered prices 2/10 of a cent per gallon in Atlantic City, Newark and other territories covered in the marketing area served.

The light and heavy fuel oil markets, both in the primary and secondary categories, are from a quarter to a half cent advanced from the quotations previously quoted. The lubricating oil market in western Pennsylvania is off from one to two cents per gallon.

The winter season in the northern Atlantic district has made the demand for fuel oils reach the expectations of the most optimistic. Residual fuel oil is selling on the Atlantic Coast at 2.875 per gallon which is the equivalent of from $1.15 to $1.20 in New York. There has been much reluctance on the part of refiners on the Gulf Coast to shade prices on domestic fuel oils within the past three weeks. Colder weather on the northeastern Atlantic Coast, ranging down to 18° and 20° above zero has vastly stimulated domestic consumption of light burning oils. Retailers, serving the tank-wagon trade are reluctant to sell below 6½ to 6¾ cents per gallon in the New York trade territory. Prices generally range from 7 to 7½ cents per gallon in the up-state and western New York territory.

Reductions in the motor fuel market were caused by a variety of developments. Primary markets on the Gulf Coast were down from ½ to ¾ cent per gallon.

The tanker market from the Gulf to the north of Cape Hatteras has been advancing steadily for clean boats. The market is now at the approximate range of 25 to 28 cents per gallon. For heavier products including Nos. 2, 4 and 6 fuel oil the range is from 27 to 31 cents per gallon. Western Pennsylvania refiners are finding it increasingly difficult to dispose of their straight run, kerosene and light fuel oil production. Their bright stock production has been reduced from about 13½ to 12½ cents per gallon. Other grades of lubricating oils, including cylinders, are down by the corresponding amount.

It appears probable that the fuel oil market in New York and surrounding territory is in position to advance from ½ to 1 cent per gallon, depending upon the demand which now is in evidence. The reduction in the primary markets for gasoline was entirely expected since the commodity has been in active competition on the Gulf Coast. The reduced requirements for motor fuel had been to the exclusion of burning oils which had been the most logical mediums of consumption for the past 6 weeks. However, it was only during the past two weeks that weather conditions have permitted fuel oil to reach its maximum consumption.

The tanker charter rates for boats in movement of light and heavy fuel oil have been on the ascendancy during the past month. It is now probable that boats from the Gulf Coast to the north of Cape Hatteras for gasoline will cost at least 27 cents per gallon. Vessels for movement of light and heavy fuel oils from Gulf Coast terminals will cost in the vicinity of 37 to 31 cents per gallon. The disparity of these figures and the increased demand from shippers of normal products are factors instrumental in the general elevation of boat rates. There have been 12 to 15 vessels removed from demurraged to active service within the past month.

There has been very little trading in domestic gasoline coastwise traffic. Three or four cargos moved during the past month have been at the price range of 4½ to 5⅛ cents per gallon. Domestic movement of motor fuel has been in keeping with weather conditions prevailing for the past two months. Out of that period, at least the first half was particularly favorable to the operation of automotive vehicles. Motor operation during the past month has been retarded almost to the exclusion of all passenger units for anything but routine or urgent purposes.

Kerosene, tankcar and tank-wagon markets have been well maintained in the New York and New England territories. The tankcar market in New York has been unchanged at approximately 4¾ cents per gallon. Demand from up-state points has been particularly heavy. New England consumption, in the Boston, Providence, Norwich and Bangor areas, has been particularly heavy during the past three weeks. Suppliers have been reluctant to change prices because of limited duration of the season and because of restricted consumption in the Michigan, Ohio, Indiana and Illinois territories. The shipments by barge via inland water canals have practically ceased and will not be resumed until next spring. Industrial fuel oil has staged the most spectacular market improvement of any product.

Gulf Coast refiners are reluctant to sell their bunker C fuel oil at less than 65 cents per barrel. Many suppliers are asking from 67½ to 70 cents per barrel and maintain that the supply is not out of balance with demand.

Markets for wax in both the New Orleans and New York territories are well maintained and the quotations for 124-126 a.m.p., ws., are about .0235 to .0245. The domestic and export demand for wax appears to be well maintained over a period of comparative depression.

With the exception of gasoline primary markets for petroleum products are holding up well under depressed conditions.

A small cargo of gas oil with a Diesel index of 58 was reported sold on the Gulf Coast for 3⅝ cents per gallon. This shipment is to be loaded in late December or early January and is consigned for Europe. Reports were current that No. 2 fuel oil of low Diesel index could be purchased in the export trade at 3⅜ cents per gallon.

Inclination of the refiners on the Gulf Coast is against price concessions on all grades of fuel oil. The impression prevails that domestic and industrial fuel oils will stage an impressive return during the three or four months of winter weather with which we are now confronted. Bunker C fuel oil in the New York Harbor is and has been maintained at 95 cents per barrel. The tank-wagon price for this product has been increased until it is now fairly well established at 2.85 cents per gallon.

The demand for 1,500,000 gallons of aviation gasoline from Great Britain went without fulfillment last week. None of the American producers of aviation gasoline were able to supply this quantity and quality of fuel.

A. P. I. Weekly Refinery Statistics

Week Ending December 3, 1938

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	491,000	18,037,000	15,675,000
Appalachian	85.9	94,000	2,876,000	741,000
Indiana, Illinois, and Kentucky	89.5	415,000	10,452,000	8,594,000
Oklahoma, Kansas, and Missouri	81.6	256,000	6,169,000	4,592,000
Inland Texas	50.3	114,000	1,656,000	2,000,000
Texas Gulf	88.9	780,000	8,895,000	13,855,000
Louisiana Gulf	97.3	129,000	2,181,000	2,712,000
North Louisiana and Arkansas	55.0	32,000	409,000	888,000
Rocky Mountains	54.2	47,000	1,158,000	740,000
California	90.0	485,000	13,542,000	98,470,000
Total reported	85.6	2,843,000	65,375,000	148,267,000
Estimated unreported	.....	332,000	3,780,000	3,350,000
*Estimated total	.....	3,175,000	69,155,000	151,617,000
*Estimated total previous week	.....	3,295,000	68,6280,00	153,634,000
*December 4, 1937	.....	3,230,000	71,244,000	119,836,000

*Bureau of Mines, currently estimated.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending November 19, 1938	271,955,000 barrels
Week ending November 12, 1938	273,394,000 barrels
Week ending November 20, 1937	304,324,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of December 6, 1938

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Chicago, Ill.	15.1	12.1	4.0	10.0
Decatur	15.1	12.6	4.0	10.0
Joliet	15.1	12.6	4.0	10.0
Peoria	15.1	13.1	4.0	10.0
Quincy	14.9	12.9	4.0	9.8
Davenport, Ia.	15.1	13.6	4.0	‡10.0
Des Moines	14.9	13.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	10.4
Minneapolis	16.5	14.5	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.0	5.0	10.3
Milwaukee	16.3	14.8	5.0	10.2
Detroit, Mich.	14.3	12.8	4.0	9.0
Grand Rapids	14.8	13.05	4.0	9.7
Saginaw	15.8	14.3	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	15.3	5.0	†9.5
South Bend	17.1	15.6	5.0	†9.0
Fargo, N. Dak.	16.7	15.2	4.0	11.6
Minot	18.0	16.5	4.0	12.9
Huron, S. Dak.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.9	4.0	7.5
St. Louis*	14.7	13.2	4.0	8.0
St. Joseph	14.4	11.2	4.0	9.3
Wichita, Kans.	13.9	10.6	4.0	7.3

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective November 1, 1938, f.o.b. Chicago tank-wagon prices: Standard range oil, 1-99 gallons, 9 cents; 100-149 gallons, 8 cents, 150 gallons and over, 7.5 cents. Stanolex fuel oil No. 1, 1-149 gallons, 8 cents; 150-399 gallons, 7 cents; 400 gallons and over, 6.5 cents. Stanolex furnace oil, 1-149 gallons, 8 cents; 150-399 gallons, 7 cents; 400 gallons and over, 6.5 cents. Stanolex grade A, 1-399 gallons, 4.75 cents; 400 gallons and over 3.75 cents. Stanolex grade B, 1-799 gallons, 4.75 cents; 800 gallons and over, 3.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Atl'tic City, N. J.	12.7	10.9	4.0	8.0
Newark	12.7	10.9	4.0	8.0
Annapolis, Md.	14.35	12.85	5.0	9.5
Baltimore	13.75	12.25	5.0	8.5
Cumberland	16.15	13.65	5.0	10.0
Wash'g'n, D. C.	12.0	10.50	3.0	9.5
Danville, Va.	16.95	14.45	6.0	12.9
Norfolk	15.75	13.25	6.0	11.5
Petersburg	16.05	13.55	6.0	11.7
Richmond	16.05	13.55	6.0	11.7
Roanoke	17.25	14.75	6.0	11.0
Charles'n, W. V.	16.55	14.05	6.0	12.6
Parkersburg	14.85	13.35	6.0	11.2
Wheeling	15.75	14.35	6.0	12.2
Charlotte, N. C.	18.15	15.65	7.0	12.1
Hickory	18.65	16.15	7.0	12.5
Mt. Airy	18.45	15.95	7.0	12.3
Raleigh	17.75	15.25	7.0	11.6
Salisbury	18.25	15.75	7.0	12.2
Charleston, S. C.	16.75	14.25	7.0	10.6
Columbia	17.75	15.25	7.0	11.6
Spartanburg	18.45	15.95	7.0	12.4

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tank-car price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be the equivalent to the dealer price less .5 cent per gallon.

While the above prices continue at Atlantic City and Newark, N. J., dealers will pay a net price of 8.4 cents per gallon for Essolene. Dealers having pumps marked only "Esso, Essolene and Standard White'" gasoline will pay 7.9 cents for Essolene. Price basis to all other undivided dealers above is Essolene dealer tank-wagon price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline Tank-wag.	Gasoline Net dlr.	Gasoline Inc. tax	Kero. tank-wag.
Atlanta, Ga.	20.5	17.5	7.0	8.5
Augusta	20.0	17.0	7.0	10.0
Macon	20.0	17.0	7.0	11.0
Savannah	19.0	16.0	7.0	9.0
Birm'ham, Ala.	21.0	18.0	8.0	8.5
Mobile	21.0	18.0	9.0	8.5
Montgomery	21.0	19.0	9.0	10.5
Jackson, Miss.	18.5	15.5	7.0	9.5
Vicksburg	19.5	16.5	7.0	9.0
Jacksonville, Fla.	20.0	17.0	8.0	8.0
Miami	20.0	17.0	8.0	8.0
Pensacola	21.0	18.0	9.0	8.0
Tampa	20.0	17.0	8.0	8.0
Lexington, Ky.	19.5	16.5	6.0	10.0
Covington	17.5	14.5	6.0	9.5
Louisville	17.5	14.5	6.0	9.0
Paducah	19.0	16.0	6.0	9.0

Price basis to tank-wagon consumers: Effective January 4, 1937; 3 cents per gallon below tank-wagon price. Effective June 4, 1938, 2 cents per gallon discount eliminated from all kerosene markets in Mississippi, Alabama, Georgia, and Florida, markets being reduced correspondingly to a net basis.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Denver, Colo.	15.5	5.0	11.5
Grand Junction	19.0	5.0	15.0
Pueblo	16.5	5.0	10.5
Casper, Wyo.	17.0	5.0	11.5
Cheyenne	13.0	5.0	13.0
Billings, Mont.	18.0	6.0	13.0
Butte	19.5	6.0	15.5
Great Falls	19.0	6.0	15.5
Helena	20.0	6.0	15.5
Salt Lake City, Utah	16.0	5.0	16.0
Boise, Idaho	19.0	6.0	18.0
Twin Falls	19.5	6.0	18.0
Albuquerque, N. M.	17.5	*6.5	12.0

*Includes city tax of .5 cent.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank-wag. con'r.	Gasoline Di-vided dlr.	Gasoline Inc. tax	Kero. tank-wag.
Ohio points	16.0	15.0	5.0	*13.0

*Includes state tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax.	Kero. tank-wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	21.5	22.5	6.0	*17.5
Reno, Nev.	20.5	21.0	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	13.5
Spokane	23.0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.0	13.5

*Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline T'wag. dealer	Gasoline T'car consr.	Gasoline Inc. tax	Kero. tank wag.
Albany	14.3	11.75	5.0	8.0
*Met. N. Y.:				
Manhat., Bronx	12.9	11.75	5.0	8.0
Staten Island	12.9	11.75	5.0	8.0
Q'ns & Bklyn.	12.9	11.75	5.0	8.0
Buffalo	12.9	12.6	5.0	7.5
Rochester	14.0	13.2	5.0	8.5
Syracuse	12.5	12.4	5.0	8.5
Boston, Mass.	11.5	10.5	4.0	7.5
Portland, Me.	14.0	11.75	5.0	8.75
Manch'ter, N. H.	14.5	12.3	5.0	8.5
Burlington, Vt.	14.7	12.3	5.0	9.5
Springf'd., Mass.	13.0	11.0	4.0	8.0
Worcester	13.0	11.0	4.0	8.0
Hartford, Conn.	13.0	10.9	4.0	7.0
New Haven	12.8	10.8	4.0	6.0
Providence, R. I.	12.5	10.5	4.0	7.5

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point; monthly purchases under 5,000 gallons, pay divided dealer tank-wagon prices at delivery point.

Pennsylvania, Delaware, and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Phil'delphia, Pa.	13.0	12.0	5.0	10.0
Pittsburgh	15.0	13.0	5.0	10.5
Allentown	14.25	12.75	5.0	10.5
Erie	14.5	13.0	5.0	10.0
Scranton	14.5	13.0	5.0	10.5
Altoona	15.0	13.0	5.0	10.5
Dover, Del.	13.5	...	5.0	10.5
Wilmington	12.5	...	5.0	9.75

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract, less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
N. Orleans, La.	19.25	16.75	*10.0	†11.0
Baton Rouge	17.25	14.75	8.0	‡10.5
Alexandria	17.25	14.75	8.0	‡12.5
Lafayette	17.50	15.00	8.0	‡12.5
Lake Charles	17.25	14.75	8.0	‡12.5
Shreveport	16.00	13.50	8.0	‡11.0
Knoxville, Tenn.	20.50	18.00	8.0	14.5
Memphis	18.50	16.00	8.0	12.5
Chattanooga	20.00	17.50	8.0	14.0
Nashville	17.50	17.00	8.0	12.0
Bristol	19.00	18.25	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon. Kerosene prices include 1-cent state tax.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank-wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Omaha	17.5	16.0	6.0	10.3
McCook	17.5	16.0	6.0	10.0
Norfolk	17.9	14.9	6.0	10.7
North Platte	18.3	15.4	6.0	11.0
Scottsbluff	19.0	13.9	6.0	11.8

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Muskogee, Okla.	13.5	5.0	7.0
Oklahoma City	12.5	5.0	7.0
Tulsa	12.0	5.0	6.0
Fort Smith, Ark.	14.25	5.0	7.5
Little Rock	16.75	7.5	9.0
Texarkana	14.0	5.0	8.0

Texas

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank-wag.
Dallas, Tex.	14.0	17.0	5.0	8.0
Fort Worth	15.0	19.0	5.0	8.0
Houston	14.5	19.0	5.0	8.0
San Antonio	14.0	18.0	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada*

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N. S.	23.5	10.0	17.5
St. John, N. B.	23.5	10.0	17.5
Montreal, Que.	20.0	6.0	14.5
Toronto, Ont.	21.0	6.0	15.5
Hamilton, Ont.	21.0	6.0	15.5
Winnipeg, Man.	27.5	7.0	20.7
Brandon, Man.	28.1	7.0	22.9
Regina, Sask.	26.0	7.0	22.0
Saskatoon, Sask.	28.3	7.0	24.9
Edmonton, Alta.	26.5	7.0	21.5
Calgary, Alta.	23.5	7.0	19.0
Vancouver, B. C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. (Indiana) November 28 reduced dealer gasoline in St. Joseph 1.7 cents.

Socony-Vacuum Oil Co., Inc., December 5 reduced tank-wagon dealer gasoline .5 cent in metropolitan New York, 1.5 cents in Syracuse and 1 cent in Boston. November 30 reduced tankcar consumer gasoline .5 cent in Boston, Portland, Providence, Syracuse, Manchester, Springfield, Worcester, Hartford, and New Haven; .35 cent in Burlington; .55 cent in Albany.

Standard Oil Co. of New Jersey December 1 reduced dealer tank-wagon gasoline .2 cent in New Jersey, at the same time making a similar reduction in minimum retail resale price. While these posted prices continue dealers will pay a net price of 8.2 cents per gallon for Essolene. Dealers having pumps marked "Esso, Essolene and Standard White" gasoline will pay 7.7 cents per gallon for Essolene.

New Field in Prospect

SHREVEPORT, La., Dec. 6.—Tide Water No. 1 Beene, Columbia County, Arkansas wildcat, cored at 8,203 to 8,223 feet, recovering 2½ feet of porous lime showing oil and gas saturation, and is coring further. The discovery of a new field is highly probable.

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of December 6, 1938

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below	.03¾	.04
63-66 octane	.04	.04¼
67-69 octane	.04¼	.04⅜
70-72 octane (regular)	.04½	.04⅝
60-62 400 grades:		
62 oct. and below	.03¾	.04
63-66 octane	.04	.04¼
67-69 octane	.04¼	.04½
70-72 octane (regular)	.04½	.04⅝
64-66 375	.04	.04¼
68-70 360	.05	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.03¾	.04
63-66 octane	.04	.04¼
67-69 octane	.04¼	.04½
70-72 octane (regular)	.04½	.04⅝
60-62 400	.03¾	.04
64-66 375	.04	.04¼

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04	.04¼
63-66 octane	.04¼	.04½
67-69 octane	.04½	.04⅝
70-72 octane (regular)	.04⅞	.05⅛

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below		.04¼
67-69 octane	.05	.05⅛

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.03¾	.04
63-66 octane	.04	.04¼
67-69 octane	.04¼	.04½
70-72 octane	.04½	.04¾
60-62 400 grades:		
62 octane and below	.03¾	.04
63-66 octane	.04	.04¼
67-69 octane	.04¼	.04½
70-72 octane	.04½	.04¾
64-66 375	.04	.04¼
68-70 360	.05	.05¼

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.04¾	.05¼
65 octane		.06¼
68-70 octane		.06¾

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.06½	.08
58-60 400, 65 oct. and higher	.07½	.09

EAST COAST (domestic)—

U. S. Motor, 60-64.9 octane:		
New York (Bayonne)	.06	.06¼
Philadelphia	.06	.06¼
Boston	.06¼	.06½
Baltimore	.06	.06¼
Charleston, S. C.	.06¾	.07
U. S. Motor, 65 and above:		
*New York (Bayonne)	.06½	.06¾
Philadelphia	.06½	.06¾
Boston	.06½	.06¾
Baltimore	.06½	.06¾
Charleston, S. C.	.07	.07¼

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane		.04¼
60-64.9	.04½	.04⅝
65 octane and higher		.04⅝
68-70		.05

Naphtha

PENNSYLVANIA (inland refineries)—

52-56 450 (blending)	.04¾	.04⅞

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.03½
Grade 18-55	.04⅛	.04¼

NORTH TEXAS—

Grade 26-70		.03¼
Grade 18-55	.03⅞	.04

CALIFORNIA—

75-85 375-390	.06¼	.06¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.03⅝

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110-flash, 540-550 e.p.	.03⅞	.04
41-43 gr., 300-320 i.b.p., 110-125 flash, 500-520 e.p.	.04⅛	.04¼
46-48 gr., 210-230 i.b.p., 480 max., e.p.	.04½	.04¾

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04	.04⅛
42-44	.04¼	.04⅜

NORTH TEXAS—

41-43	.04	.04⅛

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04	.04⅜

ARKANSAS (Ark. and N. La. del.)—

41-43		.04½

PENNSYLVANIA (inland refineries)—

45	.04¾	.05
46	.04⅞	.05⅛
47	.05	.05⅛

CHICAGO (Based on Group 3)—

41-43	.04	.04⅛
42-44	.04¼	.04⅜

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.05¾

NEW YORK (Bayonne, N. J.)—

41-43	.04⅝	.04¾

***GULF COAST (domestic)—**

41-43	.03⅞	.04

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03⅞	.04
No. 1 prime white, 38-42	.03¾	.03⅞
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03¾
No. 2 dark, 32-36	.03⅜	.03½
No. 3 zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02⅞	.03

NORTH TEXAS—

No. 1 prime white, 38-42	.03¾	.03⅞
No. 1 straw, 38-40	.03⅝	.03⅞

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36	.03¼	.03½

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36		.03⅝

CHICAGO (Based on Group 3)—

Range oil	.03⅞	.04⅛
No. 1 prime white, 38-40	.03¾	.04
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03¾
No. 2 dark, 32-36	.03¼	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02⅞	.03

NEW YORK (Bayonne, N. J.)—

*No. 1	.04½	.04⅝
*No. 2		.04
*No. 4		.04

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¾	.03
No. 4, low pourpoint, 24-28	1.00	1.10
No. 4, 15 and above, 24-28	.85	.90
No. 5, low pourpoint, 18-22	.70	.75
Below 18 fuel oil, industrial	.50	.60

NORTH TEXAS—

U.G.I. gas oil	.02¾	.03
No. 4, low pourpoint, 24-28	1.00	1.10
No. 5, low pourpoint, 18-22	.70	.75
Below 18 fuel oil, industrial	.50	.60

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.70	.75

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02¾	.03
No. 4, low pourpoint, 24-28	1.00	1.10
No. 4, 15 and above, 24-28	.85	.95
No. 5, low pourpoint, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pourpoint, 10-16	.60	.70
No. 6, 15 and above, 10-16	.35	.45

PENNSYLVANIA (inland refineries)—

36-40	.03⅞	.04⅜

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.15	1.35
24 plus Diesel, per bbl.	1.00	1.30
24 plus Diesel (bunkers)	1.20	1.50
12-16 (bunkers at tidewater)	.80	.90
10-16 (cargo lots)	.62	.80
12-17 (tankcars)	.50	.80
10-17 (high sulfur)	.45	.70
San Joaquin Valley:		
10-18 (tankcars)	.50	.80
24 plus Diesel, per bbl.	1.15	1.40
San Francisco:		
24 plus Diesel, per bbl.	1.40	1.45
24 plus Diesel (bunkers)	1.45	1.55
10-16 (bunkers)	.90	.95

GULF COAST—

No. 2 fuel		.03½
43-47 Diesel		.03½
48-52 Diesel	.03½	.03⅝
53-57 Diesel	.03⅝	.03¾
Bunker C (bulk cargoes)		.65
Bunker C (bunkers)		.75

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¼
28-30 Diesel (lighterage 6¼c per bbl.)		1.75
28-30 Diesel (tankcars)	.04¼	.04½
Bunker C (to ocean-going ships in N. Y. Harbor)		.95
Industrial fuel (tankcars)	.03¾	.04

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.19
150-160 D, 0-10	.14¼	.16
150-160 D, 15-25	.13½	.15½
150-160 E, 15-25	.13	.15
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.12½
600 dark green (untreated)	.04½	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pourpoint	.17	.17½
15 pourpoint	.16	.16½
20 pourpoint	.15	.15½
25 pourpoint	.14	.14½
Steam refined:		
600	.08	.08½
650	.10	.10½
600 Pennsylvania flash	.10½	.11
630 flash	.13½	.14
600 Warren E filtered	.12½	.13

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-6½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 pourpoint:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.12½

GULF COAST—

Pale oils:		
200-3	.07	.07¼
300-3	.07½	.07⅝
500-3½	.08⅛	.08⅜
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red oils:		
200-5-6	.07¼	.07½
300-5-6	.07¾	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° color, 400-405 flash:		
Zero pourpoint	.17	.17½
10 pourpoint	.16	.16½
15 pourpoint	.15	.15½
25 pourpoint	.14	.14½
200 vis. at 70° F., 3 color:		
Zero pourpoint	.19	.19½
10 pourpoint	.18	.18½
15 pourpoint	.17	.17½
25 pourpoint	.16	.16½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02¼	.02½

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0235	.0245
124-126 (a.m.p.) w.c. scale	.0235	.0245

NEW YORK—

Wax in bags fully refined:	
122-125 (a.m.p.) wax	.0375
125-127 (a.m.p.) wax	.0390
128-130 (a.m.p.) wax	.0400
130-132 (a.m.p.) wax	.0435
133-135 (a.m.p.) wax	.0465
135-137 (a.m.p.) wax	.0490
124-126 (a.m.p.) w.s.	.0230
124-126 (a.m.p.) y.s.	.0230
Petrolatum in barrels, carload lots:	
Dark green	.02 .02⅛
Amber	.02⅜ .02½
Extra amber	.02⅝ .02¾
Lily white	.05½ .05¾
Snow white	.06½ .06¾
Cream	.04⅛ .04¼

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.04⅜	.04½
60-62 400	.04⅜	.04½
61-63 390	.04½	.04⅝
64-66 375	.04½	.04⅝

LOS ANGELES—

U. S. Motor grades:		
55-65 octane		.05
65-69 octane		.05¼
Above 69 octane		.05½

KEROSENE

GULF COAST—

41-43 prime white	.03⅞	.04
41-43 water white	.03⅞	.04

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder stocks:		
600 Warren E	.15	.15½
600 S.R. unfiltered	.16	.16½
630 S.R. unfiltered	.17	.17½
600 flash, S.R.	.17	.17½
630 flash, S.R.	.20½	.21
Bright stock:		
8 color	.16¼	.16½

NEUTRAL OIL

200-3 color	.21½	.22
150-3 color	.19½	.20

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.	.0375
125-127 a.m.p.	.0387
128-130 a.m.p.	.0412
133-135 a.m.p.	.0437
135-137 a.m.p.	.0455
Crude scale:	
124-126 w.s.	.0235 .0245
124-126 y.s.	.0235 .0245

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (Oct. 11, 1938)*	$1.10
Van, Tex. (Oct. 11, 1938)*	.93
Talco, Tex. (Oct. 11, 1938)*	.55
Rodessa, Tex.	
See North Louisiana gravity schedule	
Cass and Panola counties, Texas	
See gravity schedule	
Altus and Tipton†	See note below
Cayuga, Tex. (Oct. 12)	.81
Clay Creek, Tex.	.85

*Humble Oil & Refining Co. †Gulf Refining Co.

Altus and Tipton, Okla., starting at below 25 degrees at 71 cents, 2-cent spread to 40 degrees and above at $1.03. East Texas price met by all buyers posting prices. Talco price adopted by Talco Pipe Line on October 11. Cayuga posted by Tide Water Associated Oil Co. Clay Creek posted by Sun Oil Co.

Gulf Coast

Conroe, Tex. (Oct. 11, 1938)*	$1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)†	See note below
Gibson, La. (Oct. 11, 1938)†	1.04
Garden Island, La. (Oct. 12, 1938)‡	1.24
Lafitte, La. (Oct. 12, 1938)‡	1.04
Cleveland, Tex. (Oct. 12, 1938)¶	1.14
Hardin, Tex. (Oct. 12, 1938)¶	1.02
Tepetate, La. (Oct. 11, 1938)§	1.03
Villa Platte, La. (Oct. 11, 1938)§	1.03
Abbeville, La. (Oct. 11, 1938)§	
See note below	
Bosco, La. (Oct. 13, 1938)‖	1.02
Creole, La. (Oct. 12, 1938)‖	.96
Gueydan, Sweet Lake and Louise, La. (Oct. 13, 1938)‖	See note below
Vinton, Edgerly, Starks, Hackberry, Timbalier Bay, Quarantine Bay, and Grand Bay, La. (Oct. 13, 1938)**	
Long Lake, Tex. (Oct. 13, 1938)**	1.08
Segno and Wing (Oct. 13, 1938)**	
See note below	
Livingston (Oct. 11, 1938)†	1.10
Gibson, La. (Oct. 11, 1938)†	1.04

*Humble Oil & Refining Co. †Shell Petroleum Corp. ‡The Texas Co. §Continental Oil Co. ‖Magnolia Petroleum Co ¶Pure Oil Co. **Gulf Refining Co.

Black Bayou, etc., starts at below 20 degrees at 79 cents; 20-20.9, 81 cents; 21-21.9, 83 cents, then a 3-cent spread to 26-26.9 degrees, 98 cents, and 27 degrees and over $1. Abbeville starts at below 36 degrees, $1.01, 2-cent spread to 40 degrees and over at $1.11. Gueydan, etc., starts at below 20 degrees, 79 cents, 3 cent spread to 26-26.9 degrees at $1, and 2-cent spread to 40 degrees and over at $1.28. Segno and Wing take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 18 gravity, 76 cents, 2-cent spread to 20-20.9 at 82 cents; then a 3-cent spread to 26.9 at $1; then a 2-cent spread to 34 degrees and over at $1.16.

Southwest Texas

Salt Flat, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)*	$ .96
Pettus (Oct. 11, 1938)*	1.29
Flour Bluff (Dec. 3, 1938)*	1.23
Darst Creek (Oct. 12, 1938)†	.96
Darst Creek and Bruner (Oct. 13, 1938)‡	.96
Luling (Oct. 12, 1938)†	.87
Lytton Springs (Oct. 12, 1938)†	.90
Mirando (Oct. 12, 1938)†	
Government Wells (Oct. 13, 1938).	
See note below	

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20 gravity, 77 cents, 3-cent spread to 24-24.9 at 89 cents.

North Louisiana and Arkansas

Smackover, Ark. (Oct. 5, 1938)*	$ .78
Buckner, Magnolia and Village, Ark. (Oct. 5, 1938)*	See note below
Schuler, Jones sand	See note below
Tullos and Urania	.90
El Dorado east field	
Lisbon, La. (Sept. 19, 1938)	
See note below	

*Smackover posted by Standard Oil Co of Louisiana, October 5, 1938; by Magnolia Petroleum Co., October 12; by Gulf Refining Co., October 13; McMillan Refining Co. and Cross Refining Co. meet price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

Schuler Jones sand schedule starts at below 25 degrees, 66 cents, with 2-cent spread to 40 and over at 98 cents; by Lion Oil Refining Co. on October 5, 1938. Schuler light Morgan sand crude takes North Louisiana gravity scale along with El Dorado and Champagnolle; by Lion Oil Refining Co., October 5; Buckner, Magnolia and Village schedules posted by Standard Oil Co. of Louisiana and Lion Oil Refining Co. on October 5; quote same prices as for Schuler Jones sand crude.

Middle Western States

OHIO OIL CO.
(Effective October 13, 1938)

Lima, Ohio	$ .90
Illinois old fields	1.05
Illinois basin	1.15
Princeton, Ind.	1.05
Western Kentucky	1.10
Greendale, Porter and Crystal, Mich. (Oct. 13, 1938)*	.92½
Buckeye, Bentley, Edenville, Beaverton, Mich. (Oct. 13, 1938)*	.90
Freeman, Mich. (Oct. 13, 1938)*	.87
West Branch and Arenac, Mich. (Oct. 13, 1938)*	.74
Muskegon	1.00
Eastern Kentucky:	
Big Sandy River (Oct. 1, 1938)†	1.23
Kentucky River (Oct. 1, 1938)†	1.30

*Simrall Corp. †Ashland Refining Co.

Rocky Mountain States

Dry Creek, Wyo. (Oct. 11, 1938)*	$ .92
Elk Basin, Wyo. (Oct. 11, 1938)*†	.90
Grass Creek, light, Wyo. (Oct. 11, 1938)*†	.90
Grass Creek, heavy (Oct. 11, 1938)†	.40
Lance Creek, Wyo. (Oct. 11, 1938)*	.77
Rock Creek, Wyo. (Oct. 11, 1938)*	1.00
Iles, light, Colo. (Oct. 11, 1938)†	.92
Iles, heavy, Colo. (Oct. 11, 1938)†	.92
Dutton Creek, Wyo. (Oct. 11, 1938)†	
See note below	
Frannie, light, Wyo. (Oct. 11, 1938)†	.55
Frannie, heavy, Wyo. (Oct. 11, 1938)†	.42
Hamilton dome, Wyo. (Oct. 11, 1938)†	.35
Midway, Wyo. (Oct. 11, 1938)†	
See note below	
Salt Creek Tensleep crude, Wyo. (Oct. 11, 1938)†	.646
Salt Creek (Oct. 11, 1938)	See note below
Canon City, Colo. (Oct. 11, 1938)‡	.90
Florence, Colo. (Oct. 11, 1938)‡	.90
Cat Creek, Mont. (Oct. 11, 1938)‡	1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡	.98
Lance Creek, Wyo. (Oct. 11, 1938)‡	.77
Lea County, N. M.	
See West Texas gravity schedule‡	
Artesia, Jackson and Maljamar	
See gravity table‡	
Fort Collins and Wellington, Colo.	
See gravity table‡	
Eddy County, N. M. (October 11, 1938)¶	.77

*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. ¶Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crude start at below 29 degrees, 86 cents, 2 cents spread to 40 and over at $1.10. Salt Creek crude excepting Tensleep, takes Standard Oil Co. of Indiana Oklahoma-Kansas prices. Stanolind Oil & Gas Co., effective October 11, discontinued posting prices in Greybull-Torchlight, Wyo., and Hogback and Hospah, N. M.

Eastern States

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO
(Effective September 1, 1938)

Bradford, Pa.	$1.68
Allegany, N. Y.	1.68

SOUTH PENN OIL CO.
(Effective September 1, 1938)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	$1.68
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.34
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.28
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.18
Corning Grade Oil in Buckeye Pipe Line Co. line (Oct. 18, 1938)	.97

PENNZOIL CO.

Group A	$1.61
Group B	1.60
Group C	1.59
Group D	1.58
Group E	1.56

PURE OIL CO.
(Effective September 1, 1938)

West Virginia	$1.39

West Texas

See gravity table.	
Pecos County (Oct. 11, 1938)*	$ .73
Pecos shallow (Oct. 11, 1938)†	.65

*Shell Petroleum Corp., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Crude Oil Price Changes

Effective December 3, Humble Oil & Refining Co. crude oil prices in West Central Texas, Gray County, Carson and Hutchinson counties, Tomball, Raccoon Bend, Satsuma, Anahuac, Dickinson, Refugio, and Mirando, all in Texas, stop at 40 degrees and over.

The Humble company, on October 11, had posted prices in the fields named on crude of 41, 42, 43, 44, and 45 degrees and over. In its December 3 schedule, crudes from 41 to 45 and over are given the 40-gravity-and-over price. One other change was made, the company lowering its posted price in Flour Bluff field to $1.23, a 4-cent reduction. Magnolia Petroleum Co., effective December 3, also discontinued its separate prices on 41-, 42-, 43-, 44-, and 45-gravity oil in North and North Central Texas, Carson, Hutchinson, and Gray counties and Tomball and Mirando fields, the new schedule making its top prices on crude of 40 gravity and over.

Rocky Mountain Runs

Production estimates for week ended December 3:

WYOMING

	Barrels
Salt Creek	15,320
Big Muddy	1,180
Byron	2,160
Dallas Derby	350
Elk basin	580
Frannie	2,300
Garland	2,020
Grass Creek	2,860
Hudson	230
La Barge	900
Lance Creek	12,360
Lost Soldier	1,770
Medicine Bow	2,950
Oregon basin	1,800
Osage	760
Quealy dome	690
Rock River	1,340
Wertz	1,490
Miscellaneous	1,730
Total Wyoming	52,540

MONTANA

Border	60
Cat Creek	560
Cut Bank	7,500
Dry Creek	1,030
Kevin-Sunburst	3,400
Pondera	250
Total Montana	12,800

COLORADO

Fort Collins and Wellington	340
Wilson Creek	270
Iles dome	1,850
Moffat	320
Tow Creek	150
Price	520
Miscellaneous	170
Total Colorado	3,620

NEW MEXICO

Cooper	4,900
Eaves	850
Eunice	25,090
Hardy	2,750
Hobbs	13,250
Jal	1,010
Langlie	4,750
Lynch	560
Lynn	880
Mattix	3,370
Monument	25,500
Penrose	5,600
Rhoades	150
Skelly	1,950
South Eunice	3,100
Vacuum	4,910
Artesia-Maljamar	6,500
Getty	300
Hogback	200
Rattlesnake	600
Miscellaneous	190
Total New Mexico	106,410

Crude Prices by Gravities

	Oklahoma	Oklahoma and Kansas	North and Central Texas	Louisiana and Arkansas	East Central Texas	Gray County, Texas	Hutchinson and Carson counties, Texas	Raccoon Bend, Satsuma and Tomball, Texas	West Texas and Lea County, N. M.	Fort Collins and Wellington, Colo.	Anahuac and Dickinson, Texas	Refugio, Texas	Mirando and Duval Texas	Gulf Coast Texas	Cass and Panola counties, Texas	Beaumont and West Beaumont, Texas	Lockport, Iowa, Cameron Meadows, Louisiana	Artesia, Jackson and Maljamar, N. M.	Iowa, Louisiana
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Below 18																	$.74		$.75
18-18.9									$.53		$.74	$.79	$.74	$.79			.76		.77
19-19.9									.53		.74	.79	.74	.79		$.79	.78		.79
20-20.9	$.60	$.70							.55		.77	.82	.77	.82		.82	.80		.81
21-21.9	.63	.72							.57		.80	.85	.80	.85		.85	.82		.83
22-22.9	.66	.74						.95	.59		.83	.88	.83	.88		.88	.85		.86
23-23.9	.69	.76			$.78			.97	.61		.86	.91	.86	.91		.91	.88		.89
24-24.9	.72	.78	$.71		.80			.99	.63		.89	.94	.89	.94		.94	.91		.92
Below 25				$.73											$.73				
25-25.9	.75	.80	.73	.75	.82			1.01	.65		.92	.97	.92	.97	.75	.97	.94		.95
26-26.9	.78	.82	.75	.77	.84			1.03	.67		.95	1.00	.95	1.00	.77	1.00	.97		.98
27-27.9	.81	.84	.77	.79	.86			1.05	.69		.97	1.02	.97	1.02	.79	1.02	.99		1.00
28-28.9	.84	.86	.79	.81	.88	$.72	$.67	1.07	.71	$.81	.99	1.04	.99	1.04	.81	1.04	1.01	$.61	1.02
29-29.9	.87	.88	.81	.83	.90	.74	.69	1.09	.73	.83	1.01	1.06	1.01	1.06	.83	1.06	1.03	.63	1.04
Below 30																			
30-30.9	.90	.90	.83	.85	.92	.76	.71	1.11	.75	.85	1.03	1.08	1.03	1.08	.85	1.08	1.05	.65	1.06
31-31.9	.92	.92	.85	.87	.94	.78	.73	1.13	.77	.87	1.05	1.10	1.05	1.10	.87	1.10	1.07	.67	1.08
32-32.9	.94	.94	.87	.89	.96	.80	.75	1.15	.79	.89	1.07	1.12	1.07	1.12	.89	1.12	1.09	.69	1.10
33-33.9	.96	.96	.89	.91	.98	.82	.77	1.17	.81	.91	1.09	1.14	1.09	1.14	.91	1.14	1.11	.71	1.12
34-34.9	.98	.98	.91	.93	1.00	.84	.79	1.19	.83	.93	1.11	1.16	1.11	1.16	.93	1.16	1.13	.73	1.14
Below 35																			
35-35.9	1.00	1.00	.93	.95	1.02	.86	.81	1.21	.85	.95	1.13	1.18	1.13	1.18	.95	1.18		.75	
36-36.9	1.02	1.02	.95	.97	1.04	.88	.83	1.23	.87	.97	1.15	1.20	1.15	1.20	.97	1.20		.77	
37-37.9	1.04	1.04	.97	.99	1.06	.90	.85	1.25	.89	.99	1.17	1.22	1.17	1.22	.99	1.22		.79	
38-38.9	1.06	1.06	.99	1.01	1.08	.92	.87	1.27	.91	1.01	1.19	1.24	1.19	1.24	1.01	1.24		.81	
39-39.9	1.08	1.08	1.01	1.03	1.10	.94	.89	1.29	.93	1.03	1.21	1.26	1.21	1.26	1.03	1.26		.83	
40 and over	1.10	1.10	1.03	1.05	1.12	.96	.91	1.31	.95	1.05	1.23	1.28	1.23	1.28	1.05	1.28		.85	

Effective December 3, 1938, Humble Oil & Refining Co. revised its October price schedules as shown in Columns 3, 6, 7, 8, 11, 12 and 13. The only changes made were the discontinuance of prices on crude of 41, 42, 43, 44 and 45 degrees and over. Humble's new schedule stops at 40 degrees and over. Companies that met Humble's schedule of October 11, have conformed to the revised price schedule, stopping at 40 degrees and over.

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1938 High	1938 Low	Week ending Dec. 3 High	Week ending Dec. 3 Low	Week ending Dec. 3 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Com. sh. earn. 1937	Com. sh. earn. 1936	Dividends paid in 1937	1937 High	1937 Low	1936 High	1936 Low
78	55	72	70¼	71	Amerada Corp.	788,675	N.P.	50cQ	10-31-38	$3.04	$2.52	$.200	114⅞	51½	125½	75
27⅝	17¾	22⅞	21¼	22⅞	Atlantic Refining	2,663,999	$25	25cQ	12-15-38	3.51	2.59	1.00	37	18	35⅛	26⅝
23¾	12⅛	19¾	18⅜	18⅝	Barber Asphalt Co.	390,223	$10	75c	12-16-37	1.91	1.14	1.00	43⅜	10⅛	38½	21
21⅝	10⅛	17½	16¾	17¼	Barnsdall Oil Co.	2,250,344	$5	25cQ	11-1-38	0.85	1.01	1.00	35¼	10	28¼	14⅛
10¾	7	9	8½	8⅝	Consolidated Oil Corp.	13,915,167	N.P.	20cQ	11-15-38	1.48	1.18	.90	17⅜	7	17¼	11½
35⅝	21¼	29½	28	28½	Continental Oil of Delaware	4,682,583	$5	25cQ	12-20-38	2.98	2.05	1.50	49	24	44⅞	28⅛
9¾	5	8	7⅝	7⅝	Houston Oil (new)	1,098,618	$25		10-17-30	0.94	—0.03	....	17⅝	4¾	13⅞	6⅜
22⅝	12⅛	16¼	15⅛	15½	Mid-Continent Petroleum	1,857,912	$10	35c	12-1-38	2.86	2.57	1.50	35⅜	14	30⅞	17¼
17⅜	10⅝	14¼	13¼	14¼	Mission Corporation	1,382,945	$10	$1	6-29-38	1.31	0.48	1.25	34	15	29⅞	16⅜
23	12½	18⅛	16⅝	17¼	National Supply	1,155,170	$10	$2 pf.‡	12-22-37	4.90	2.02	($)	41⅜	17⅝	75½	19⅞
14⅞	8⅞	9¾	9¼	9¼	Ohio Oil Co.	6,563,377	N.P.	20c	12-15-38	1.30	0.70	1.00	22⅞	8	18	12⅛
15⅞	10¼	11¾	11¼	11½	Pacific Western Oil	1,000,000	N.P.	50c	12-20-38	1.39	1.58	.75	29¾	11¾	23½	11⅜
9¼	6¼	..	..	..	Pan American Pet. & Trans.	4,702,945	$5	$1*	12-21-37	1.18	0.52	1.00	17⅛	7	20⅝	12¼
44⅜	27¼	40¾	39¼	40½	Phillips Petroleum	4,449,052	N.P.	50cQ	12-1-38	5.42	4.02	2.75	64	30⅛	52⅜	33⅛
25⅜	15	23	21¼	22	Plymouth Oil Co.	1,029,800	$5	35cQ	12-12-38	2.85	1.65	1.65	29⅞	13	27⅜	11⅞
13½	8¼	10¼	9⅝	10	Pure Oil Co.	3,285,120	N.P.	25c	12-1-37	2.15	1.63	.25	24⅜	8⅜	27⅞	16
9⅞	5	9⅞	8½	8½	Richfield Oil Corp.	3,896,638	N.P.	50c	12-21-38	0.35		.25	6½	4⅛	..	..
27½	15½	22½	21	21⅛	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	12-15-38	1.97	2.00	1.00	54⅛	16	44	30½
18⅜	10	14⅜	14	14⅜	Shell Union Oil	13,070,625	N.P.	35c	7-15-38	1.44	1.57	1.00	34⅜	14⅞	28¼	14⅜
34⅜	18½	27	26	26	Skelly Oil	1,003,949	$15	50c	12-15-38	6.07	4.42	1.50	60⅝	26½	47⅝	19½
16⅜	10⅜	14	13⅜	13⅝	Socony-Vacuum	31,151,071	$15	25c	9-15-38	1.82	1.38	.80	23¼	13	17½	12½
34⅞	25⅛	27⅜	26⅝	27	Standard Oil of California	13,014,754	N.P.	35cQ†	12-15-38	3.17	1.79	2.00	50	27⅛	47⅝	35
35½	24⅝	27½	26½	27⅝	Standard Oil (Indiana)	15,267,030	$25	25cQ	12-15-38	3.66	3.09	2.30	50	26½	48½	32⅜
50⅛	32½	50⅛	50	50⅛	Standard Oil of Kansas	112,837	$10	$2	12-8-38	6.93	1.91	5.00	43	30⅝	31	25
58⅜	39⅜	51⅝	50¼	50¼	Standard Oil of New Jersey	26,224,767	$25	50c§	12-15-38	5.64	3.73	2.50	76	42	70⅜	51⅛
59	45	57	55	57	Sun Oil	2,316,484	N.P.	25cQ	12-15-38	3.86	3.25	$1 & 8% stk.	77½	44½	91	70
4¼	1⅜	3½	3⅛	3⅜	Superior Oil Corp.	1,388,079	$1	....		0.32	0.14	....	7¾	1½	6¾	3
49⅝	32⅝	43¾	42	43⅜	Texas Corp.	10,875,006	$25	50cQ	1-5-39	5.02	4.10	2.25	65⅛	34¾	55¼	28⅞
5¾	2⅝	4⅞	4⅝	4⅜	Texas Gulf Producing Co.	888,138	N.P.	15c	12-15-38	0.68	0.93	.10	9⅝	2	8⅞	4⅝
12½	7	10⅛	9⅝	9¾	Texas Pacific Coal & Oil	888,140	$10	10c	12-1-38	1.11	0.72	.40	16⅝	5⅜	15¼	7½
15¾	10⅛	13⅛	12⅝	12⅝	Tide Water Associated	6,369,175	$10	25cQ	12-1-38	2.08	1.03	1.20	21⅝	13⅛	21⅜	14⅜
22½	17⅛	19⅜	18⅝	18¾	Union Oil of California	4,666,270	$25	30cQ	11-10-38	2.58	1.40	1.40	28¼	17½	28½	20⅝
23½	20	21¼	20¼	20¼	Union Tank Car Co.	1,200,000	N.P.	30cQ	12-1-38	1.70	1.76	1.60	31½	22	31⅝	22⅝
3½	1⅝	3⅛	2⅞	3	Wilcox Oil & Gas	506,522	$5	....	5-10-28	0.24	—0.06	....	6¼	1⅜	5¼	2¾

*Payable in 3⅛ per cent notes. †Includes extras. ‡One-tenth share $2 preferred stock. §Also 1½ per cent stock dividend.

New York Curb Exchange

1938 High	1938 Low	Week ending Dec. 3 High	Week ending Dec. 3 Low	Week ending Dec. 3 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Com. sh. earn. 1937	Com. sh. earn. 1936	Dividends paid in 1937	1937 High	1937 Low	1936 High	1936 Low
11¾	5	9⅜	9¼	9¼	American Republic Corp.	1,308,049	$10	10c	7-11-38	$0.27	$0.28	$0.40	10	6⅝	..	..
10¼	4⅞	7¼	6¼	6½	Bridgeport Machine Co.	260,000	N.P.	$1.25	12-30-37	1.90	1.26	2.00‖	21⅜	7	21	13¼
39	24¼	27½	27¼	27¼	Buckeye Pipe Line Co.	200,000	$50	50c	12-15-38	4.02	4.40	3.75	51½	36	50	39¾
117½	97	117	117	117	Chesebrough Mfg. Co.	120,000	$25	$2Q†	12-19-38	6.73	7.46	7.00	12	95½	124¾	105
11	5⅛	7½	6⅞	7⅛	Cities Service (new)	3,714,317	$10	....	6-1-32	1.02	0.13	....	5⅜	1½	7⅜	3
2⅜	⅞	1	⅞	1	Cosden Petroleum	462,551	$1	....	.....	0.19		....	5½	1½	4½	1½
27½	17½	22½	22⅛	22¼	Creole Petroleum	6,975,383	$5	50cSA†	12-15-38	1.61	1.23	1.00	38¾	20¼	39	19⅞
10¼	5½	7⅝	7½	7½	Darby Petroleum	351,390	$5	25cSA	1-15-39	1.36	1.26	.50	18⅝	6½	18⅛	9
3½	1⅜	1⅜	1⅜	1⅜	Derby Oil & Refining	263,162	N.P.	....	.....	1.34	0.66	....	8⅜	2¼	6¾	1⅞
31	19	..	..	..	Eureka Pipe Line	50,000	$50	50c	11-1-38	—0.12	—0.62	4.00	47½	24½	47½	38½
46⅞	33	39½	37½	38½	Gulf Oil Corp.	9,076,202	$25	25cQ	12-15-38	3.51	2.90	1.00	63½	33	59	36
72⅝	56	67½	65¼	66⅝	Humble Oil & Refining	8,987,840	N.P.	62½c	12-27-38	5.22	3.80	2.00	87	54⅞	80	57
19½	14⅛	17¾	16¾	16¾	Imperial Oil of Canada	26,965,078	N.P.	62½cSA†‡	12-1-38	0.98	0.95	1.25	24¼	14½	24½	19¾
9⅜	6⅝	6¾	6¾	6¾	Indiana Pipe Line	300,000	$10	20c	11-15-38	1.03	1.00	.80	15	5⅞	9¾	5½
31¼	21	28½	26	26	International Petroleum	14,324,088	N.P.	$1.25†‡	12-1-38		1.81	2.50	39½	23½	39⅝	32⅝
5	2¾	3	2⅞	2⅞	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	0.17	0.20	....	8¾	2⅜	5⅜	2⅝
25⅛	15⅝	20	19⅛	19½	Lion Oil Refining	434,820	N.P.	25cQ	10-10-38	2.17	1.43	1.50	34	12½	17⅜	7⅜
10⅜	6⅝	9⅝	8⅞	9¼	Lone Star Gas	5,553,747	N.P.	20c	12-22-38	1.14	1.02	.60	14¼	5¼	14¼	9⅞
9⅜	6½	7⅜	7⅛	7⅛	Louisiana Land & Exp.	2,977,449	N.P.	10cQ	12-15-38	0.58	0.64	.50	15¼	6⅜	15⅝	9⅞
9¾	6⅜	8½	8⅛	8½	Midwest Oil Co.	998,444	$10	50c	12-15-38	1.14	0.95	1.00	14⅝	6¼	..	..
5¾	4½	5⅛	5	5	Mountain Producers	1,593,584	$10	30cSA	12-15-38	0.76	0.62	.60	7⅞	4⅛	8⅝	5
14⅝	11½	14	13¾	13¾	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-38	0.96	1.19	1.00	19½	12	23	17⅝
9¼	6⅝	7½	7½	7½	National Transit	509,000	$12.50	40c	12-15-38	1.19	0.79	1.00	12½	7¼	15⅝	9¼
2⅝	1½	1⅝	1⅝	1⅝	New Mexico and Arizona	1,000,000	$1	1c	12-1-38	0.02	0.02	....	5	1⅛	6⅝	1⅝
4½	4	..	..	..	New York Transit	100,000	$5	15c	10-15-38	0.49	0.34	1.00	5⅜	3⅞	6¼	4¼
6	4	5⅛	4⅞	5⅛	Northern Pipe Line	120,000	$10	15c	12-1-38	0.78	0.66	1.00	12⅜	5⅜	9⅜	4⅞
7⅜	3½	6	5½	5⅞	Pantepec Oil	2,441,142	$1	....	.....	....	0.05	....	9⅝	2⅜	10⅛	3¼
3½	1⅝	1⅞	1⅝	1⅝	Root Petroleum Co.	336,045	$1	25c	2-1-37	—0.17	0.45	.25	12⅜	2	19¼	4½
4	2⅛	2¾	2⅝	2⅝	Ryan Consolidated	296,931	N.P.	....	.....	0.46	....	....	6½	2¼	4⅜	1⅞
5⅜	3¼	3½	3½	3½	Southern Pipe Line	100,000	$10	15cSA	9-1-38	0.85	0.41	.45	7¼	3⅞	7⅞	3¼
39	28¾	31½	31½	31½	South Penn Oil	1,000,000	$25	37½cQ	9-24-38	4.64	3.59	3.65	56	35	44	32½
22¼	19	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	50cQ	10-1-38	0.95	0.97	2.00	42	20	60	44
18¾	15	17⅞	17⅝	17¾	Standard Oil of Kentucky	2,604,790	$10	50cQ†	12-15-38	1.60	1.46	1.50	21¼	14¾	23⅜	17⅛
8¾	5½	6⅛	5½	5¾	Standard Oil of Nebraska	166,403	$25	25c	3-29-37	—0.58	0.42	.25	13¾	8	14⅝	11
22¾	16¼	20½	19¾	19¾	Standard Oil of Ohio	753,740	$25	25c	12-15-38	3.67	4.77	1.50	45	16	40	21¾
3¼	2⅛	2½	2⅜	2½	Sunray Oil	2,006,176	$1	10c	12-24-37	0.42	0.26	.25	4⅞	2	5	2⅝
5¼	3½	4⅜	3½	4	Texon Oil & Land	936,024	$2	15cQ	9-30-38	0.51	0.36	.45	7⅝	2	9⅜	5⅜
7⅝	4¼	5	4¼	4⅝	Transwestern Oil Co.	750,000	$10	....	.....	0.48	0.06	....	13⅞	4⅝	..	..
5¼	2¾	3⅛	2⅞	2⅞	United Gas Corp.	7,818,959	$1	....	.....	0.25	0.20	....	13⅞	3	10¾	4

†Includes extras. ‡Payable in Canadian funds. ‖Of which $1 was in preferred stock.

New or Improved Equipment

Novel and Useful Cup-Selector Introduced by Darling Valve

Darling Valve & Manufacturing Co., Williamsport, Pa., manufacturer of Darcova, Darval and Darflex cups, has introduced a novel cup-selector

which permits the user to select the proper sizes of any of the above composition cups for use in all makes of pumping equipment regularly used in the oil fields. The selector is attractively made in dial form and carries the characteristic orange, blue, and green colors which for years have designated the Darcova, Darval, and Darflex valve cups.

Instructions for the use of the selector are given on its face. Sizes of cups are listed consecutively around the outer edge of the center dial, and the names of various manufacturers and trade names of pumps are listed in the panel at the bottom of the dial. It is merely necessary to set the size of the cup in the upper window, and in the lower window read the names of the pumps on which this cup may be used. If it is desired to ascertain the size of cup for use in any pump, the name and size of pump are set in the lower window, and the corresponding size of cup is read in the upper window. These cup-selectors will be furnished without charge.

Here and There With Men Who Manufacture Equipment

A. S. Gifford, Jr., direct factory representative for Billings & Spencer Co., Hartford, Conn., will be located hereafter in Los Angeles, Calif. Mr. Gifford is thoroughly familiar with the Billings products used in the oil fields, such as the Red Head single- and double-jaw pipe wrenches, Gardnerench and the double-broached box wrenches.

Elmer R. Tieberman, Tulsa, Okla., representative of the Lunkenheimer Co., Cincinnati, Ohio, is accompanying Edmund P. Lunken, son of the president of the Lunkenheimer Co., in calling on the trade in the new Illinois, Indiana and Kentucky oil fields.

Foote Bros. Gear & Machine Corp. has appointed Murray-Baker-Frederick Co., 715 Linden Avenue, Shreveport, La., district representative for northern Louisiana and southern Arkansas, and Lloyd C. Taylor district representative for IXL gear and reducer products in Virginia. Mr. Taylor's office is in Richmond, Va.

Walter Jehu has been appointed district manager of Timken Roller Bearing Co.'s Boston, Mass., office at 1107 Commonwealth Avenue. Mr. Jehu was formerly general manager of the company's Toronto, Ontario, office.

J. N. Walker has been elected vice president of Oxweld Acetylene Co., a unit of Union Carbide & Carbon Corp., New York. Mr. Walker has been general sales manager of the Linde Air Products Co., also a unit of Union Carbide and Carbon.

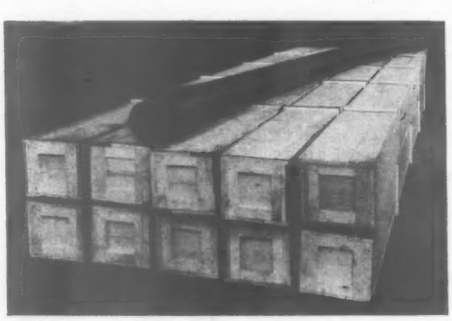
W. O. Bates, Jr., who recently was transferred from the San Leandro, Calif., offices of Caterpillar Tractor Co., to become head of the patent department in Peoria, Ill., has been appointed a vice president of the company. Mr. Bates is a graduate of Cornell University with a degree of Mechanical Engineering.

Shipment of Smooth-Bore Hose on Its Way to Persian Gulf

Here is the start of a portion of a large shipment of 8-inch smooth-bore dock and cargo hose to the Anglo-American Oil Co. at Abadan on the Persian Gulf. The hose will be used for unloading oil and gasoline from tankers to land pipe lines. The job was executed by Hewitt Rubber Corp., Buffalo, N. Y.

Last year Hewitt's San Francisco representative, F. V. Springer, took a leisurely trip around the world. Stopping at one of the capitals in Europe, an informal discussion with foreign oil interests relative to smooth-bore dock and cargo hose led to an immediate initial order for 12 lengths. "Rush shipment" was demanded. Recently this Iran firm cabled for a large quantity of the same kind of hose.

According to Hewitt officials there are several features that make this new product particularly adaptable to the rough, hot-weather use it will receive after it has sailed two seas and landed at Abadan. These include: (1) All lengths are equipped with special leakproof built-in nipples, eliminating the use of outside clamps. (2) The smooth bore permits a faster flow than through a rough bore of like size, and the Hew-



prene synthetic tube which makes the smooth bore possible will not swell, soften, or slough off. (3) No wire is exposed to the corrosive effects of oils, gasoline, and salt water. (4) A wire insertion, bonded to the nipple at each end, provides for the dissipation of static electricity. (5) Withstands high pulsating pressure with low expansion, and resists high vacuum for suction service, yet possesses extreme flexibility.

Special sun- and weather-resistant cover compounds were used in the manufacture of this order to combat the weather conditions of Iran.

Ratchet-Jack Principle Used in Kreiter Roller-Chain Tool

A new mechanical roller-chain tool designed and manufactured by Kreiter Gear & Machine Co., 2509 Harrisburg Boulevard, Houston, Tex.,

operates on the ratchet-jack principle. Blocks for various pitches of roller chains hold the chains in place, and the blocks are easily removable. Pilot-pins of hardened tool steel a few thousandths smaller than the chain pins seated in a back-up block, force the roller-chain connecting-links out of press fit center plate chains. The pitch-blocks handle single, double, triple, and quadruple roller chains. The tool takes chain apart and assembles it in one to two minutes. The tools are available in two sizes, the small tool handling pitches of three quarters, 1, and 1¼ inches, and the large size handling pitches of 1½, 1¾, 2 and 2½ inches.

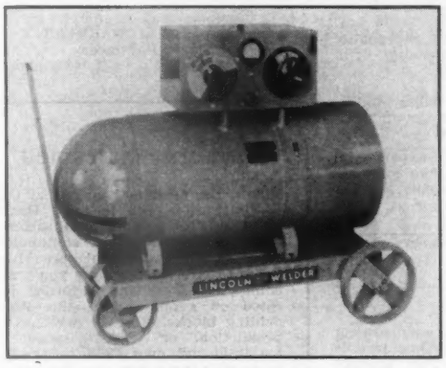
Tulsa-Type Scraper Is Built to Clean Long Gasoline Lines

The new Tulsa-type pipe-line scraper manufactured by the Tulsa Boiler & Machinery Co., Tulsa, supplements the two other Tulsa-type scrapers of the knife and brush types and has been developed to clean particularly long gasoline lines. After the knife- or brush-type scraper has been used to clean a sediment- or corrosion-blocked line, this plug-type scraper will keep the line clean with minimum effort. The scraper consists of a driving section using special composition rubber driving-discs flexibly connected to a cleaning-head interchangeable with any one of three types—plug, knife, or brush. All parts subjected to wear are heat-treated to gain maximum life and all parts are made interchangeable whenever possible. The skeleton of the scraper is the same for the 6-inch and 8-inch sizes, and is readily changed from one size to another by changing guide-arms, driving-discs and brushes or knives. When changing one type scraper to another type it is only necessary to remove one unit and replace the other for scrapers of the same size.

In addition to the interchangeable feature of the knife, brush, and plug types of scrapers, parts are also interchangeable for 6- or 8-inch lines. One skeleton and the few extra parts make three distinct types of scrapers in two sizes. Wearing parts are made of special heat-treated steel and twin guide-wheels mounted side by side now replace the former single wheel. Teeth are cut much deeper and bearing area is four times greater, assuring maximum service on all wearing parts. Driving-discs are of a special composition rubber, which the action of the gasoline or crude oil in the line tends to expand, forcing them closely against the inner walls of the pipe line, maintaining a tight seal.

Lincoln "Shield-Arc" Welders Have Self-Indicating Control

A line of "Shield-Arc" welders, said to provide greater convenience and accuracy because of a new self-indicating dual continuous control, is announced by the Lincoln Electric Co., Cleveland, Ohio. These welders have both job selector and



current control calibrated and equipped with dials which indicate the type of work and the number of amperes for each setting. It is claimed this development enables the welding operator to attain the highest quality welds and highest possible welding speeds because he can vary both the slope of the volt-ampere curve and the amount of welding current independently and positively to suit every job encountered.

Another feature of this welder control is that both voltage control (job selector) and current control are continuous in operation. This design provides thousands of possible combinations of voltage and current. It is said this simplifies the setting of the control and accounts for an exceptionally wide welding range as to types of work, welding conditions, sizes of electrodes, and thicknesses of material.

A self-protected motor on all AC motor driven welders is said to permit sustained operation with large sized electrodes at high average welding currents without danger of burnout. Separate excitation of the welding generator in all types of these new welders provides the generator with a constant source of excitation which is independent of conditions at the welding arc. It is claimed that this aids in the maintenance of a steady arc for minimum spatter.

National Introduces Pumper for Use in Shallow-Field Areas

National Supply Co., Toledo, Ohio, announces the Type TU140G-JD14T National unit pumper made for use in shallow fields. This unit is of the

twin-crank design and is similar in general appearances to the types of pumpers used for deeper work. It has a 7.44 nominal horsepower rating at 20 S.P.M. A double reduction gear with a ratio of 24.9 allows the use of all types of oil-country prime movers, including those operating at higher speeds. Maximum polished-rod stroke is 32 inches, and the safe working load of the walking beam is 6,170 pounds (A.P.I.).

This unit has a compact, integral all-welded construction, which achieves rated capacity with less weight. The frame, gear-case, samson-post, and saddle-bearing bushings form an all-welded, integral unit without bolts or rivets. The case and post are welded to the base and are reinforced by two diagonal angles running from the post to the frame. The gear-case is bored at one setting, after the entire welded assembly is made, to insure vertical and horizontal alignment of shafts.

The walking-beam is a 10¼-inch CB section and has an extension for beam counterweights. Counterweights are used in increments from one to seven, giving a counterweight effect at maximum polished-rod stroke of 1,281 to 4,036 pounds. A link-type polished-rod hanger of a design thoroughly proven in pumping service is regular equipment. The linkage closely approximates straight-lift and is simple in construction and easy to lubricate. A hanger of the arc type is available on special order. Ample clearance for servicing operations without disconnecting the pitmans is gained by a removable type of beam hanger head.

Bulletins, Booklets and Other Literature for the Trade

International Nickel Co., Inc., New York, has revised its data sheet on nickel cast iron to preclude the impression that the recommendations for compositions to produce the indicated properties have been taken from A.S.T.M. specifications for gray iron castings (A 48-36). The tables represent the recommendations of the company for cast iron for various types of service that will fall within the strength classifications of the A.S.T.M. specification.

Two new instruments for dust sampling are described in bulletins just published by the Mine Safety Appliance Co., Pittsburgh, Pa. The Midget impinger employs the accurate impinger method. The Electrostatic dust and fume sampler is designed for quantitative sampling, and employs the principle of preionization with electrostatic precipitation.

Despatch ovens suitable for the oil-testing laboratory are illustrated and described in new bulletins issued by the Despatch Oven Co., Minneapolis, Minn. These ovens are of the gravity and mechanical convention (natural and forced draft) types.

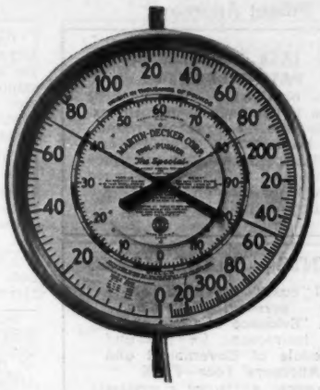
Specifying meters and regulators for the measurement and control of liquefied petroleum gases is a highly selective process requiring technical information. Reliance Regulator Corp., Alhambra, Calif., in cooperation with American Meter Co. has issued a comprehensive bulletin which simplifies the process. The bulletin may be obtained from Reliance or from any American Meter Co. office.

An attractive catalog, describing pump governors, regulators, liquid-level controllers, valves, traps and strainers manufactured by the Fisher Governor Co. of Marshalltown, Iowa, is just off the press. It is divided into 12 sections, and contains 16 pages of the Fisher capacity charts, useful in sizing controllers properly for all fluids and all conditions.

A bulletin describing the Sullivan Alleviator, for reducing maximum rod loads on beam units operating pumping wells, is offered by Sullivan Machinery Co., Michigan City, Ind., and its branches in Dallas, Tex., and Tulsa.

Weight-Indicator Is Designed to Handle Heavy Drilling Load

Martin-Decker Corp., Long Beach, Calif., has announced a new weight-indicator, the Special, particularly designed to handle extremely heavy loads, having 20 per cent greater capacity than previous



indicators. This feature, along with a supersensitive vernier indicator with a capacity of 100 points, is said to insure sufficient capacity to handle wells deeper than any thus far drilled. The Special has an unusually large dial with built-in illumination which can be clearly read from all parts of the rig floor day or night. Ten interchangeable dials nested within the case give direct readings in pounds for all commonly used stringups and line sizes. The center dial is graduated in weight and vernier indicator points for the convenience of those desiring to use this system.

Two gauge hands—a regular gauge hand and a supersensitive one (six times as sensitive)—are designed to enable the Special to cover all phases of drilling and production work with safety and high precision.

The entire unit is factory-filled and sealed. It cannot leak, and requires no pumping, priming, or other attention. The use of light, tough alloys eliminates unnecessary weight. The device weighs only 60 pounds. Its compact construction and line weight reduce tendency to swing on the deadline in rough drilling. The unitized leak-proof case and shatterproof rubber-sealed dial glass seal the instrument against water, rain and the elements.

No Ink Is Used on Chart of New Automatic Recording Scale

A new automatic recording scale which operates on a patented principle is offered now by the Line Scale Co., Inc., of Oklahoma City. This record-

ing unit is not complicated, say the manufacturers. No ink is used on the chart, which makes a plain, permanent record of every movement of the scale.

The charts are of metal and said to be practically indestructible. Both sides are used for recording purposes. An advantage mentioned is that the new line scale recorder may be fitted to any of the regular drilling scales now in use.

CLASSIFIED ADVERTISING

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER
Patents obtained — infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 2014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

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SINCE 1908 Burkhart's legal forms—serving Mid-Cont. & Illinois oil fields. Free catalog & samples. Burkhart Ptg. & Sta. Co., 115 So. Cinn., Tulsa, Okla.

Leases and Drilling Blocks

LEASES—East Texas, La., South Ark. 20 acres up, dollar acre up.—Owners—Address Attorney, Box 1122, Little Rock, Ark.

DRILLING deals wanted 50,000 acres Southern Illinois in and around production area. Elmer Gant, Anna, Illinois.

NEW MEXICO
State Oil and Gas Leases
Forty acres and multiples thereof at $6.00 to $30.00 per forty in the Hot Spots. Write for list. Twenty years in the business and not a complaint.
HARRY S. WRIGHT
New Mexico State Lessee, P. O. Box 347, Santa Fe, N. M., or P. O. Box 166, Council Bluffs, Iowa.

ILLINOIS 60,000 acres in and near production. Illinois Minerals Company, Cairo, Illinois.

TEXAS leases in active counties cheap. Large or small tracts for brokers and salesmen only. Write H. H. WHITE, P. O. Box 674, San Antonio, Texas.

FOR SALE—2400 acres Oil and Gas Leases Dahlgren Township Hamilton County Ill. five yr. leases rentaus paid, title certificates quick sale 50 cts. per acre. Box 612, Owensboro, Kentucky.

NEW 10-year 40-acre Oil Lease Lea County, joining Gulf Oil Corp., apprx. 1½ miles east of production in Eunice Oil Pool, only $10.00 acre. Roy G. Barton, Hobbs, New Mexico.

SACRIFICE 40-acre Oil Lease, Chaves County, for only $10.00, full price. Guarantee title. P. O. Box 191, Clovis, N. Mex.

FOR SALE—Shallow production; depth, 300 to 400 ft.; 190 acres; 30 wells; cheap P. W. Jenson, Route No. 2, Chelsea, Okla.

WILL purchase shallow producing lease in Eastern Kansas. D. R. Moser, 323 Security Trust Bldg., Indianapolis, Indiana.

IT'S NO EXAGGERATION TO SAY That your idle funds can earn 300% or more per annum in natural Gas. It's being done here. You can own a lease and producing well for less than $1000. An income for years. I furnish the lease and drill your well in gas proven areas. Write
BUDDENBORG
Osawatomie, Kans.

100% SHALLOW OIL CONNECTION Want party with cash for developing productive shallow leases where all oil can be sold. W. H. Haffey, 510 Wright Bldg., Oklahoma City, Okla.

320 ACRES, Crane Co., Tex., Magnolia lease, cheap in fee. Address 415 Littlefield Building, Austin, Texas.

FOR SALE—10 yr. Lease Block 1500 acres Rooks Co., Kansas. Seven good showings 1928. Before acid. Core drill structure. George Hrdy, Castle, Okla.

Leases and Drilling Blocks

PARTY now conducting special geophysical exploration surveys for oil promise is often in contact with drilling block opportunities, leases, production, royalties and sometimes capital for development where favorable conditions exist. P. O. Box 364, Fort Worth, Texas.

HOT deal—have 40 Acres in Illinois lime area 3300 feet offsetting production. Will lease for some cash and ⅛ override. Eight wells in same section. "Act quick." Address Box J-770, The Oil and Gas Journal, Tulsa, Oklahoma.

3,000 ACRES Leases and Royalties Illinois Basin—20 Acres up. ELTON, BECK. Herrick, Illinois.

WANTED associates with finances to help develop for oil 80 acres San Juan County, New Mexico. Production close by. W. G. Hokett, 2322 N. 9th St., Phoenix, Arizona.

WILL SELL eighth interest in lease, proven shallow oil field for $130 to finance well. Box 262, Claremore, Okla.

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, more liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Survey Service

OIL FINDING DOWSING METHOD My deductions a practical method which picks up vibratory reactions emanating from carbo-hydrates. Physico method finds oil, locates faults. Same method discovered great East Texas field also our Watson #2 first producer Wilmington, Calif. field. Employ a man that owns producing wells. I find oil if it exists or no charge. George Miller, 1548 Post, Torrance, California.

Mailing Lists

ROYALTY Lists. Unit Owners Lists. Stockholders Lists. By states. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Oklahoma.

Situations Wanted

EXECUTIVE
Available after January first thoroughly familiar with accounting, financing, drilling and production. Address
Box J-771
The Oil and Gas Journal, Tulsa, Okla.

Help Wanted

WANTED: Reliable and experienced Gas Lift Sales Engineer. Give complete personal record with references. Address Box J-611, The Oil and Gas Journal, Tulsa, Oklahoma.

WE BUY names royalty owners receiving pipe line checks, also stockholders. Box 2063, Tulsa, Oklahoma.

Financing

CAPITAL SEEKERS—Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan.

DOLLAR bulletin Free. Important financial information that should be in hands of every Oilman. Request Bulletin OG. John Morris, 1040 S. Paxton, Philadelphia, Pa.

For Sale—Maps

FREE COPY OIL AND GAS FIELD MAP Of Texas, Eastern N. M., parts Southern Okla., SW Ark. and La. with every order for County Ownership or Oilfield Map. New map just out on Westmount Area in Lea Co., N. M.
Price $6.50 cloth $4.50 paper.
ZINGERY OIL MAP COMPANY
Fair Building Fort Worth, Texas

UP-TO-DATE production maps of Kansas or Oklahoma. Oklahoma 4 by 6 ft. on paper $12—cloth $15. Kansas 4 by 8 ft. on paper $16—cloth $20. Also smaller sizes 28" by 36"—$4 and $6.
NICHOLS & PRATT MAP CO.
P. O. Box 2192
Tulsa, Okla.

Wanted

WANTED TO BUY
Vanadium bearing refinery soots and flue dusts including from Mexican and Venezuelan crudes. Henry Hansen, 218 Fayette St., Peoria, Illinois., Tel. 4-1212.

If we do not maintain a classification exactly suited to the type of advertisement you wish to run, we shall be glad to create a fitting one.
Classified Department

Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

R. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

Producing and Non-Producing
OIL ROYALTIES
Registered Dealers Only.
GRIMES ROYALTY CO.
Hunt Bldg. Tulsa, Okla.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
703 Kennedy Bldg., Tulsa, Okla.

FOR SALE
Oil and Gas Royalty in the Illinois Basin of West Kentucky.

One-eighth of all oil and gas under 8,000 acres, or more than 12 square miles either as a whole or in part. Located in Hancock County, Kentucky, between Indian Creek and Hawesville faults with eight producing oil and gas formations known to exist. Five of which are producing on four sides of this property. Gas now being produced and marketed from shallow sands. A series of deep wells to be drilled on this property with two drilling outfits now on same and ready to start operations. A gas field producing for more than 40 years from formations 400 feet below the McClosky formation is located 3½ miles east of this property.
For information address royalty owner,
BOX 230, OWENSBORO, KENTUCKY
PHONE 145.
All deals direct with owner, no brokers or exchanges.

For Sale—Equipment

FOR SALE at Oklahoma City: 9⅝-in. O.D. 8-thread 40-lb. second-hand A.P.I. C seamless steel casing, range 2. I. T. I. O. Co. Bartlesville, Okla.

TRACTORS
Government crawler type Caterpillars, 5 ton $375, 10 ton $695. Slightly used. Perfect condition.
O. C. EVANS
Mt. Sterling, Ky.

FOR SALE

20,000 feet 4" seamless drill pipe with tool joints to single. We have a complete line of casing, line pipe and drilling machinery. Also have racked in Kansas 25,000 feet 8" plain end line pipe suitable for high pressure gas or oil line. Wire, phone, or write to
Louisiana Iron & Supply Co.
Shreveport, Louisiana

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30	7 Lines	$2.45	$4.20	$5.95	$7.70
4 Lines	1.40	2.40	3.40	4.40	8 Lines	2.80	4.80	6.80	8.80
5 Lines	1.75	3.00	4.25	5.50	9 Lines	3.15	5.40	7.65	9.90
6 Lines	2.10	3.60	5.10	6.60	10 Lines	3.50	6.00	8.50	11.00

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1 Inch	1 time	$5.00
1 Inch	13 times	4.50 per inch
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This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

CLASSIFIED ADVERTISING

For Sale—Equipment | For Sale—Equipment | For Sale—Equipment | For Sale—Equipment

PIPE—STEEL STORAGE TANKS—REFINERY EQUIPMENT

75,000 ft.—2½" line pipe-T&C—5.75 lbs. 30,000 ft.—6" line pipe-T&C—24 lbs.
100,000 ft.—4" line pipe-T&C—10.79 lbs. 100,000 ft.—6" line pipe-T&C—19 lbs.
150—80,000-bbl. tanks—quoted—"As is and where is," cut down and loaded on car; or reerected on customers' grade any location

COMPLETE STOCK OF REFINERY EQUIPMENT — SEND US YOUR INQUIRIES

SONKEN-GALAMBA SUPPLY COMPANY

W. C. Berry or H. J. Galamba, Riverview at Second, Kansas City, Kansas
Robt. W. Duden, 2100 S. Union, Tulsa, Oklahoma

DISMANTLING GASOLINE PLANT
Engines, Compressors, Storage Tanks, Regulators, Meters, Pumps, Buildings, etc.
Will sell plant complete or individual items.
Also complete stock of Line Pipe and Casing on hand.
Wire, phone, write
PRODUCERS PIPE & SUPPLY CO.
Tulsa, Oklahoma
Box 1814 Phone 2-1188; L.D. 501

FOR SALE—1 Model KS-6-DHK Cardwell Oilwell servicing winch unit, mounted on Mack Truck. Can be inspected O.C. garage. Operating condition now. I.T.I.O., Bartlesville, Oklahoma.

1—Gasoline powered rotary rig consisting of: 2—125 HP Waukesha engines with reduction gears, 1—Reverse clutch, 1—3 speed drawworks, 1—6x12 Gardner-Denver pump, 1—96' Emsco steel derrick, 1—17" Oil Well rotary, 1—48" Boykin traveling block, 1—Boykin crown block, 1—Steel tool house, 1—clothes house, 1—Kohler light plant with house, 1—100 bbl. water tank and 1,350' 4" drill pipe.
1—Portable Rig, Rig #447 complete with 180 HP Waukesha-Hesselman engines, slush pump and all equipment including 3,200 feet 4½" pipe.
1—6,000 foot Diesel electrical-mechanical rig, complete and in excellent condition.
K. S. RICHARDS
P.O. Box 830 Phone 2-1161 Ft. Worth, Tex.

FOR SALE: At our Oklahoma City Warehouse Model D48 Muskogee Iron Works long line well servicing unit powered by HXE Hercules engines mounted on No. 55 truck. I.T.I.O., Bartlesville, Oklahoma.

FOR quick sale, a bargain in two Lufkin 6½" pumping units complete. Also other oil field equipment. P. C. Wade, P O. Box 1986, Houston, Texas. Telephone Hadley 6544.

FOR SALE
Over 75,000 feet 10¾" OD Line Pipe. Cleaned. Stacked Walton, Indiana. Priced for quick sale.
STANDARD OIL FIELD SUPPLY CO.
P. O. Box 883 Houston, Texas

TWO NEW W. K. M. Hitzler Type Adjustable Bottom Hole Chokes with O. C. T. Type T21A 2000# Test Casing Heads for 5½" O. D. Casing. Each, $500.00 Net. Hunter Atha, Box 70, Mt. Pleasant, Mich.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

FOR SALE. Several sets reconditioned type 29 rams for 9⅝" OD Shaffer control gate. I. T. I. O., Bartlesville, Oklahoma.

FOR SALE — MAGNETOMETER—Like new—Cost nearly $1,000.00, will sacrifice for $250.00 Cash or terms to responsible parties. B. H. Hilburn, Gulf States Building, Dallas, Texas.

VIKING 4", 250# pressure rotary pump and Foote reducer ready for connection to engine. Like New $350.00. Worthington 4", 200# pressure rotary, only $275.00.
CORKEN
206 E. Grand, Oklahoma City, Okla.

FOREIGN MARKETS

OFFER AN IMMEDIATE OUTLET FOR

USED OIL EQUIPMENT

Don't fail to let us list your used equipment in the Classified columns of our Annual World Issue, which is to be published December 29.

Not only does this issue offer a world-wide market for your used equipment, but it will be of immediate and lasting reference value to the some 2,200 key men in the oil industry in foreign fields who are to receive copies.

The Oil and Gas Journal

Classified Department

FOR SALE: At Oklahoma City 1—"35" Allis-Chalmers Monarch Crawler Type Tractor with or without power take-off for belt drive. I. T. I. O., Bartlesville Oklahoma.

SEVEN air compressors 110 ft. capacity, pneumatic hammer and motors, forges, jacks, pipe tongs, rivet tongs, wrenches, mauls, rope, pulley blocks, punchers, reamers, rivets, etc. Stough Tank Erecting Co., 831 So. Xanthus Place, Tulsa, Oklahoma.

ONE Power Driven Rig Complete: Consisting of 1—Wilson Giant Draw Works w/ 1—7¼ x 10" Type FXK Gardner-Denver Power Pump w/ Air Chamber, Powered by 2— Type PA 100 HP International Motors, 2750' of 4½" OD Acme Full Hole Drill Pipe w/ Tools, Practically New. The Globe Supply Company, Box 761, Shreveport, Louisiana.

DERRICKS FOR SALE
72-foot LEE C. MOORE Tubular Derricks.
SOONER PIPE & IRON CO.
15 E. Cameron Tulsa, Okla.
Phone 2-8492

FOR SALE: Oklahoma City — Approximately 2000' of new 3½" OD 13.3# seamless steel drill pipe less couplings and new Byron Jackson Hopkins anti-friction API non-full hole tool joints. I. T. I. O., Bartlesville, Oklahoma.

FOR SALE: At Oklahoma City 10 United Iron Works conical exhaust pots cheap. I. T. I. O., Bartlesville, Oklahoma.

FOR sale cheap: At Oklahoma City approximately 1300 8" standard Line pipe couplings with dutchmen. I. T. I. O., Bartlesville, Oklahoma.

Equipment Wanted

WANTED: 2000—9⅝" OD Field End Colona Casing Protectors. I.T.I.O. Purchasing Dept., Bartlesville, Oklahoma.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.
Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier-El Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Santa Paula*	Wheeler Ridge	Kettleman Hills	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	...	...	...	$.80	$.76	$.76	$.77	$.78	...	...	$.70	$.70	$.70	...	...	$.70	...
15-15.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	...
16-16.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	...	...	...	.82	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.78	.78
19-19.9	.82	.79	.74	.82	.87	.84	.81	...	...	...	.85	.76	.78	.77	.78	...	$.70	.74	.74	.71	$.70	...	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	...	...	...	.88	.78	.82	.77	.80	...	.70	.78	.78	.72	.70	...	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	...	...	...	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	...	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	...	...	...	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	...	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	...	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	...	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	...	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	...	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	...	1.02	.95	...	.89	.99	.86	.88	1.01	.98	.90	.83	...	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	...	1.05	.98	...	.92	1.03	.90	.91	1.06	1.02	...	...	...	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	...	1.10	1.03	.88	...	...	1.02	...	.96	1.06	.95	.95	1.10	1.06	...	...	...	.95	...
28-28.9	1.14	1.10	.90	1.14	1.15	...	1.14	1.07	.90	...	...	1.06	...	.99	1.10	.99	.99	1.15	1.10	...	...	...	.97	...
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	...	...	1.09	...	1.03	1.14	1.03	1.02	1.20	1.14	...	...	...	.99	...
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	...	...	...	1.07	1.17	1.08	1.06	1.25	1.18	...	...	...	1.01	...
31-31.9	...	...	...	...	1.24	Pipe	1.24	1.22	.97	Ship	...	...	...	1.11	1.21	1.12	1.09	1.29	...	...	...	...	...	...
32-32.9	...	...	...	...	1.27	Line	1.27	1.27	1.00	...	...	...	...	1.14	1.25	1.16	1.13	1.34	...	...	...	...	...	...
33-33.9	...	...	...	...	...	...	...	1.32	...	1.28	...	...	...	1.18	1.28	1.20	1.17	1.38	...	...	...	$1.19	...	...
34-34.9	...	...	...	...	...	...	...	1.37	...	1.32	...	...	...	1.22	1.32	1.25	1.20	...	...	...	...	1.23	...	...
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Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over. By Standard Oil Co., effective October 15: El Segundo, 14 to 16.9 degrees, 80 cents; 19-19.9, 82 cents; 20-20.9, 85 cents; 21-21.9, 88 cents; 22-22.9, 92 cents; 23-23.9, 95 cents; 24-24.9, 99 cents; 25-25.9, $1.03; 26-26.9, $1.06; 27-27.9, $1.10; 28-28.9, $1.14; 29-29.9, $1.17; 30-30.9, $1.21. Wilmington. 14 to 16.9, 75 cents; 17-17.9, 77 cents; 18-18.9 79 cents: from 19 degrees upward, prices same as Signal Hill.

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